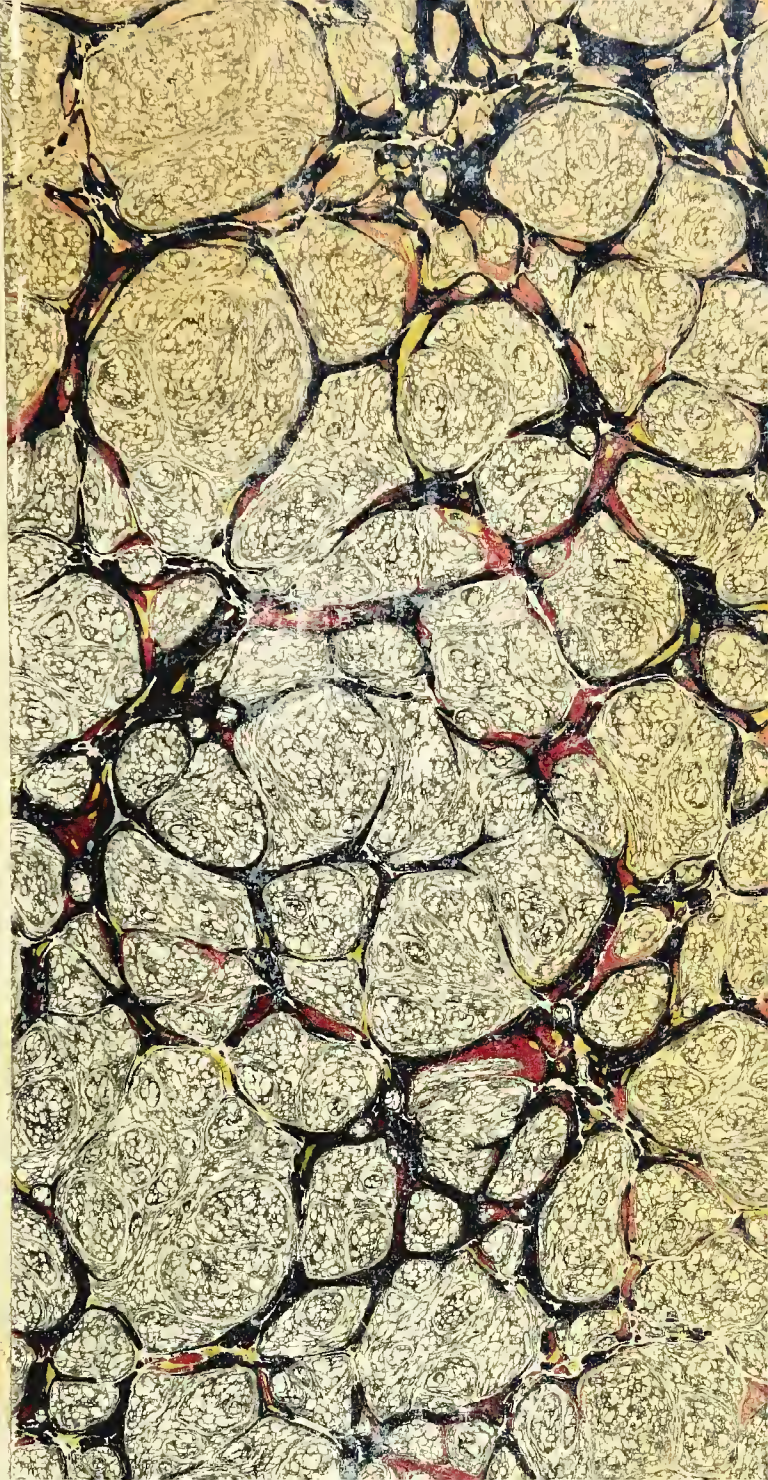




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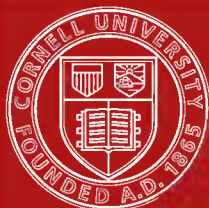
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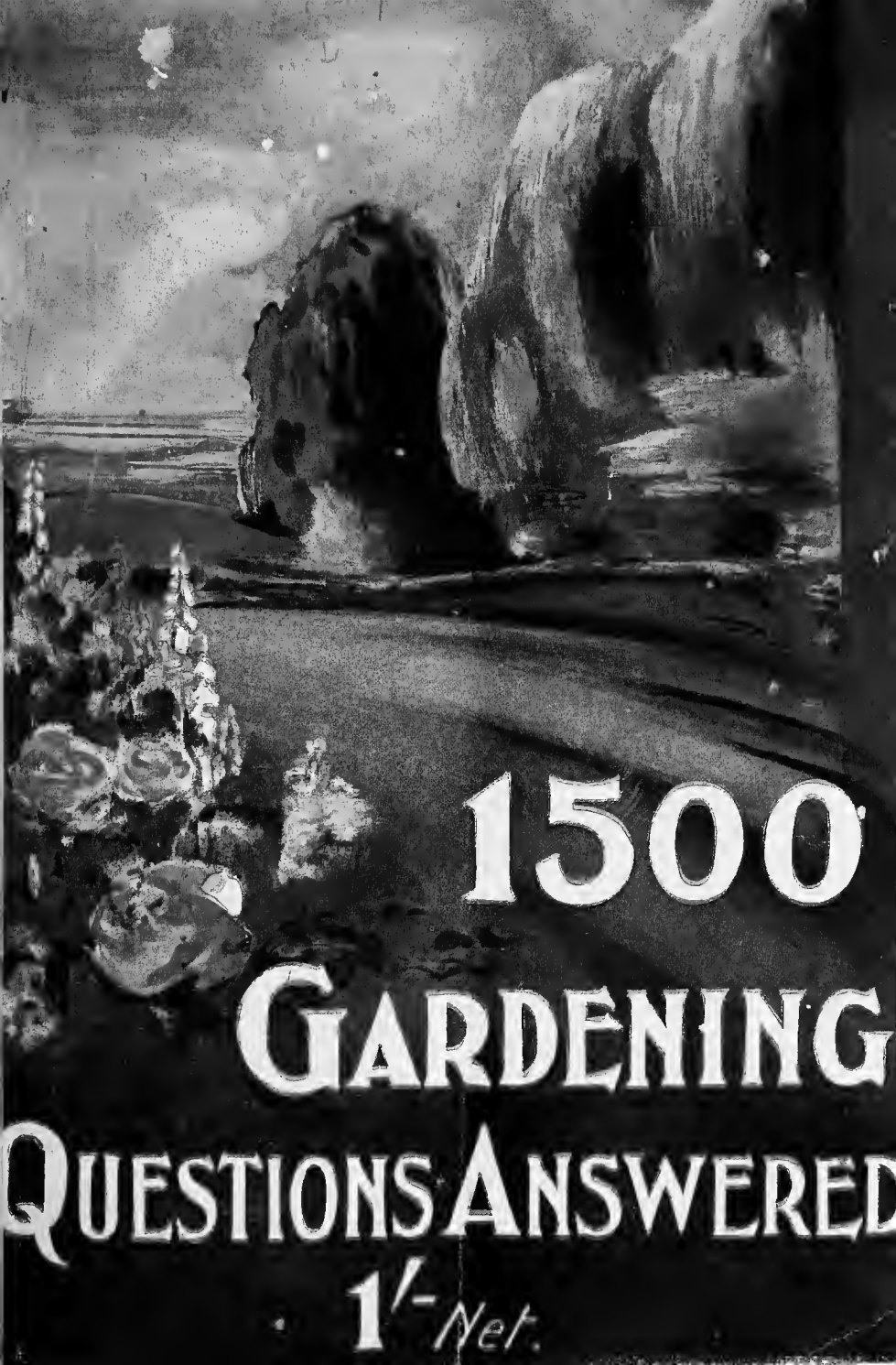
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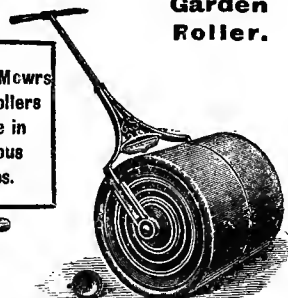
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No attempt has been made to follow a strict botanical classification; with few exceptions, all plants are referred to under their popular names. One of these exceptions is the so-called Geranium, but it is now so well known that this is a misnomer for the Pelargonium, that no excuse is necessary for adopting the latter designation. Where a plant is known by two or three names, a reference to the index will enable the reader to find the one adopted in this volume.

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Caterpillars.—Is there a good preventive?

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Cyaniding.—Is there a fairly safe method?

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1,500 GARDENING QUESTIONS

ANSWERED.

ABUTILONS.

Care of Plants in Bloom.

Is it necessary to keep Abutilons which are in bloom in the greenhouse all the summer?

If required to remain in bloom, the plants had better be kept in the greenhouse. Otherwise they may be placed outside, preferably in a lightly-shaded situation, for a period of rest.

Culture of Specimen Plants.

What shall I do to get specimen plants of Abutilons in 6-in. pots?

Procure cuttings early in spring, and strike them in a gentle hotbed, or else get small plants and pot them on. Do not stop them, unless they refuse to break. The best soil is good, turfy loam, with some leaf-mould, decayed manure, and sand.

Cutting-back.

Do Abutilons require cutting-back or pruning in any way? Mine seem to grow very straggly.

Being of a free habit of growth, Abutilons must be cut back occasionally, to keep them within reasonable dimensions.

Striking Cuttings.

Would it be right to cut down an Abutilon in July, and put in cuttings of the shoots? The plant, through neglect, has lost almost all its leaves.

This plant may be cut down with good results. At the season named any of the tops, or sideshoots, will strike freely in sandy soil under a hand-light, or in a glass-covered box in the greenhouse. The old plant will be all the better for the operation.

Watering.

Can you tell me the requirements of Abutilons as to water, when in growth and at rest?

They require plenty of water, but, of course, more during the summer than in winter. When they are cut back, the soil should remain almost dry for a time, both before and after, until they are well started into growth again.

ACACIA.

Acaciae for Pot Culture.

Please name two good varieties of Acacia to grow for foliage and bloom, in pots in a front window.

The varieties of the Acacia are innumerable, reaching to nearly four hundred; but for your purpose two of the best are *Acacia armata* and *Drummondii*, both with yellow, sweet-scented blossoms, and flowering freely in quite a small state.

Acacia lophantha for Bedding-out.

Are this season's seedlings of *Acacia lophantha* fit subjects for bedding-out? How high would they grow when so treated?

Yes; if seed is sown early, in a moderate warmth, and the plants are kept growing on steadily, they may be used for bedding the same season. The height they attain depends upon their size when planted out, the nature of the soil, and the character of the season. As a rule, early-raised seedlings attain a height of eighteen inches or two feet during the first season.

Acacias Throwing Up Suckers.

Two *Acacia* trees are making splendid growth, but I notice they are throwing up shoots at distances of six to twelve feet from the trunks. I have cut off all that have appeared up to the present.

It is very unusual for the *Acacia* to produce suckers to this extent, especially young trees. There must be some obscure cause. All that can be done is to pull or cut off the suckers as fast as they appear, and if they persist in reappearing, dig down to the roots, and cut the sucker-growths clean away, or even remove the root just above the point where the suckers are produced. We presume that the trees have experienced no check to growth, such as being cut back, etc.—this often causes the production of numbers of suckers.

Flowering Size of *Acacia lophantha*.

I have two *Acacia lophantha*, raised from seed two years ago. They are now over three feet high, each with a single stem. How old is this kind before it blossoms?

Acacia lophantha seldom flowers to any extent until the plant attains a considerable size—say, six feet, or more, in height. Grow the plants as strongly as possible, ripening the wood well in the autumn. They would do better planted out in a greenhouse border than in pots.

Mimosa.

What is the name of the *Acacia* having small, bright yellow, rosette-like flowers, sold in the spring by florists under the name of "*Mimosa*"?

The *Acacia* usually sold in the markets and shops, and known as "*Mimosa*," is *A. dealbata*, but there are several others, including *A. armata*, *A. Drummondii*, etc., with small yellow blossoms. All are cool greenhouse plants, from Australia, and are of very easy culture.

Pruning Newly-planted Acacias.

I have some "mop" *Acacia* trees just planted (November), which have a quantity of foliage on them. Would it be advisable to cut them now, or early in the spring?

Prune these plants in the early spring, just before the new growth commences.

Striking Cuttings.

Will you tell me how, and when, to take cuttings from a greenhouse *Acacia*?

Cuttings of the young shoots of these plants (without flowers), taken in summer, will root in well-drained pots of very sandy peat, if kept fairly warm, close, and moist.

AGAPANTHUS.***Agapanthus* Buds Falling.**

Two years ago I repotted my *Agapanthus*, which had bloomed splendidly. The following year they grew well, but did not bloom, and this year they have continued to grow and have sent up good flower-spikes, but just as they were about to open the buds fell off. The soil is good, and they are

properly watered. I have grown these plants for years with success. Can you tell me how to rectify the trouble?

This is a very unusual occurrence, these plants being easily managed, as a rule. Turn one or two out of the pots, and, if these are crammed with roots, repot them into larger sizes (9-in. or 10-in. pots), or else give them plenty of water and liquid manure, repotting in the autumn or early spring. They are very strong-rooting subjects, and, as the treatment is quite correct in other points, they must need more nutriment.

Agapanthus Culture.

Please let me know how to cultivate the Agapanthus.

The Agapanthus, or Blue African Lily, succeeds best when rather firmly potted in good, loamy soil, with a moderate proportion of leaf-soil or old hotbed manure, some sand, and a little old mortar rubbish (crushed), using fairly large pots, or tubs. Keep them moderately dry during the winter, but give plenty of water while in growth, with all the sun possible.

Dividing and Repotting.

Two large pots are full of Agapanthus, which have not bloomed this year. They are quite pot-bound, and the roots interlace. Should they be separated, and how?

These bulbs must certainly be separated and repotted, as they are exhausted. Turn them out in the spring, and pull all the bulbs apart, roots and all, and then place a moderate number in each pot in fresh soil, spreading out the roots well. Do not cut the roots if you can help it.

Protecting against Frost.

Can I winter an Agapanthus in a cold frame?

The Agapanthus is almost hardy, and if kept dry during severe weather should be quite safe in a cold frame, though it would be as well to cover the glass with some mats or old sacks on cold nights.

Winter Treatment.

Will Agapanthus survive the winter if protected by ashes, as I have no greenhouse?

The Agapanthus will stand a few degrees of frost, but is hardly likely to survive the winter; and to cover it with ashes would cause the plant to rot. It will stand through the winter in any dry place, with a little protection.

ALSTRÆMERIAS.

Outdoor Culture.

What is the general treatment of Alstrœmerias for outdoor growth?

These should be planted in deep, light, rich soil, with a somewhat warm and sheltered situation. Plant about two feet apart, and four inches below the surface. Once fairly established, the Alstrœmerias require no special treatment, but grow, spread, and bloom profusely.

Size of Pots.

I have an Alstrœmeria tricolor, which is catalogued as only for greenhouse culture. In what sized pot should it be grown?

This should be grown in a large-sized pot, say 9-in. or 10-in., or in a box. This variety would do well if planted at the foot of a south wall.

Suitability for Pots.

Are *A. brasiliensis* and *psittacina* suitable for growing in pots?

These beautiful Peruvian Lilies are of a somewhat rambling habit, and do better planted out than in pots. They will succeed quite well in a fairly sheltered and warm position.

When to Plant.

When should *Alstroemerias* be planted, when not grown from seed? Are they roots or bulbs?

These delightful plants have tuberous roots (not bulbs), which should be planted in the spring, about April.

Winter Treatment.

May *Alstroemerias* be left in the ground all the winter without protection?

Slight protection is necessary for most varieties, but *A. aurantiaca*, *A. lutea*, and *A. chilensis* are almost hardy, and in fairly sheltered spots need no covering. With due protection, all may be left in the ground for the winter.

AMARYLLIS.***Amaryllis longifolia*.**

Will you let me know how to treat the bulbs of *Amaryllis longifolia*? I propose to pot them and grow in an unheated greenhouse. Should I cover all or any part of the stems with mould?

This charming plant is also known as *Crinum longifolium*. It has flowers of a soft red colour; is nearly if not quite hardy; and is a capital subject for a cool greenhouse, flowering during the summer. It should be potted with the bulbs about three inches below the surface of the soil, using light, loamy soil, with plenty of sand.

***Belladonna* Lilies in Pots.**

Can I succeed with *Belladonna* Lilies in a cold greenhouse?

This fine *Amaryllis* is easily grown in pots. Give a compost of fibrous loam, leaf-mould, and sand. Use good-sized pots, and keep the soil nearly dry until the roots have been formed and the growth has commenced. They will do quite well in the cold house, provided that frost is excluded.

***Belladonna* not Blooming.**

I have had a *Belladonna* for three years, in a greenhouse, with an oil lamp to keep out frost. The leaves increase, and the plant looks healthy, but it does not bloom. What treatment does it require?

This plant should have plenty of water while in growth, and be well ripened off when this is over. It would probably do better if planted six inches deep in light soil at the foot of a south wall, in the open air.

Culture of *Amaryllis* Hybrids.

Nearly four years ago I sowed seed. The bulbs are now in 6-in. pots, with leaves about two feet long. They have never flowered, nor have they been dried off. Shall I keep them growing, or dry them off?

These bulbs should have flowered sooner than this. Dry them off during the coming winter, starting them again in spring, in heat, when they will probably flower. They succeed best in a compost of loam, peat, and sand, and should have the temperature of a cool stove during the growing and flowering period. Do not over-pot, and always give good drainage.

***Hippeastrum* Failing.**

Some *Amaryllis* (*Hippeastrum*) have not flowered at all well. They are in 5-in. pots. The bulbs are about four inches round. I kept them in a cold house all the summer, on a shelf near the glass; and have given them

no water since drying them off in the spring. What is the cause of their failure?

Some varieties of these plants are deciduous, losing their leaves in the winter, while others are evergreen; and though the first should be dried off as described, the latter ought never to be allowed to become perfectly dry at the roots. If you have dried off any of the evergreen kinds, that accounts for the failure. When the plants are doing well, 6-in. pots are none too large for them.

Hippeastrum Starting.

I have just brought my Hippeastrums into a heat of about sixty degrees, and started them by giving a gentle syringing. Is this treatment correct?

If the pots could be plunged in a steady hotbed of seventy to seventy-five degrees, they would make a more vigorous growth. The air temperature should usually range over sixty degrees—seventy to eighty degrees in the daytime.

Treatment for Ordinary Section.

What treatment and soil do Amaryllis require?

You do not say what kind the Amaryllis are. If those of the ordinary section, they should be kept dry through the winter, and potted and started in the spring in any good loamy soil. They should be kept warm, and supplied with plenty of water while in growth and bloom.

When to Pot.

When is the best time to pot Amaryllis purpurea? Mine are in 4-in. pots, but they do not flower.

This is the Scarborough Lily, also known as Vallota purpurea. The bulbs should be repotted in April. Strong examples, in 5-in. pots, should flower freely.

Winter-flowering Hippeastrum.

How long should a Hippeastrum procerum be kept growing? The leaves are still forming, but the ends of the older ones are turning yellow and dry. Is this correct?

This is a winter-flowering (stove) species, and had therefore better be kept growing on, if possible.

AMPELOPSIS.

Ampelopsis and Plaster.

Will the Ampelopsis cling to the lath and plaster wall of an old cottage?

This Ampelopsis (Veitchii) will cling to any slightly rough surface, and you can have nothing better for the purpose, though if the plaster is very rotten, the branches may break away here and there.

Autumn Colours.

Is the difference between Ampelopsis japonica and Ampelopsis Veitchii, that—while both have the same leaf and self-clinging habits—the former turns scarlet-crimson and gold in autumn, and the latter various shades of bronze?

Ampelopsis Veitchii and A. japonica are practically the same thing. It is also known as A. tricuspidata and Vitis inconstans. The plants vary to some extent in character, especially as they are sometimes raised from seed. The true A. Veitchii sometimes bears the most beautiful crimson, scarlet, and gold foliage in the autumn. The locality and aspect have also something to do with it.

Bare Base.

An *Ampelopsis Veitchii* planted against a south wall. is bare for about six feet from its base. What is the best remedy for this?

The only thing to be done is to put in a couple of small plants at the base, and train them to cover the bare spaces.

Cutting Back.

A recently-planted *Ampelopsis Veitchii* is about three and a half feet high. To induce it to cling to the wall before it is this height, can it be cut back to within a foot of the ground?

You can cut this plant down, if you like, in March or April; but if left alone it will cling to the wall right enough as soon as it finds out where it is.

Ivy and Ampelopsis.

An *Ampelopsis Veitchii* and Ivy are creeping up the same wall. Will the Ivy in time kill the other creeper?

The Ivy will not kill the other plant unless it is allowed to completely smother it. At the same time, the combination is not a desirable one.

Moving an Ampelopsis.

I want to remove an *Ampelopsis Veitchii*, about five or six years old. Would this survive if cut down close to the ground?

This plant may be cut down in the spring. It should not be cut down and moved at the same time; wait till it is growing again.

Quick-climbing Variety.

What *Ampelopsis*—other than the Virginian Creeper—can I get to cover a wall quicker than *Ampelopsis Veitchii*?

Ampelopsis muralis or *A. hirsuta* would probably answer your purpose, the former in particular being a very rapid grower.

Striking Cuttings.

Can cuttings of *Ampelopsis* be taken, and, if so, when is the best time to do so?

Cuttings may be taken and inserted in pots of sandy soil, in a cool house or frame, any time during the autumn.

ANEMONES.

Anemone appenina.

Does *Anemone appenina* (blue) require to be taken up in the autumn and wintered in a cold frame?

These are supposed to be hardy, and are usually planted and left in the ground permanently.

Anemone fulgens Checked.

In the autumn I planted small beds of *Anemone fulgens* and Giant French Anemones, but gave no protection. In February, as the frost had affected the foliage, I gave slight protection, which I took away in March. The leaves have not all died, but there has been no sign of bloom (April). Shall I place a box with a glass top over them next winter?

In the ordinary course these should have bloomed; but they may have only received a check, and will do so presently. Unless space is wanted, leave them a little longer—until the leaves die down, if possible—then lift, dry, and place them in boxes. There is no necessity to cover them with glass.

Anemones in Window-boxes.

Some Anemone seed was planted in a window-box, and is now (October) showing above ground. How should the seedlings be treated?

These require no special treatment. The soil must be kept fairly moist; and in severe weather cover with a little litter or moss. It is doubtful whether they will bloom next year—for this purpose roots should have been planted.

Dividing *Anemone japonica*.

What should be done with a large clump of autumn Anemones of several years' growth? They have flowered freely this season, but rather small blossoms. Should they be dug up and divided in the autumn, or wait until the spring?

It is doubtless *Anemone japonica* that is referred to, and, in this case, the roots should be taken up, divided, and replanted in the spring—April. Give them a bit of deeply-worked and well-manured soil.

Double Anemones Failing.

Two years ago I planted two double Anemones. I did not take them up last year. This spring the foliage looked well until about the time to flower; then all turned yellow, and each plant only had one solitary flower. The ground was well broken up and manured before planting. I planted them four inches deep and eleven inches apart. What is the cause of the failure?

For one thing, the roots were planted rather too deeply—from two to three inches is the right depth—and they might have been put a little closer; still, they ought to have done better than this. They may have got touched by a late frost in the spring, just as they were coming into bloom, when they ought to have been covered and protected in some way. Take them up, after flowering, let them rest in a dry condition for a time, and then replant in a different position.

Plants to Follow Anemones.

I have a bed of red, white, and blue Anemones. What would be good subjects to follow after these have flowered in spring?

We would suggest *Gladioli* (which may be planted as late as April), *Montbretias*, or *Peutstemons*; any good summer-bedding plant would also do.

Poppy Anemones.

Last spring I sowed seed of the Giant French single Poppy Anemones in the open garden. They made some tiny bulbs, which I transplanted into the borders. They are now throwing some leaves. Will they bloom next spring?

These plants will probably bloom in the spring—that is, if the roots are strong enough.

St. Brigid Anemones from Seed.

What is the best way to raise St. Brigid Anemones from seed? Can they be planted in the open?

The best month to sow the seed of these plants is February, but it may be done later—say, to the end of March. Unless the soil is naturally fairly light and fine it would be better to sow in boxes in a frame, and plant the seedlings out.

ANTIRRHINUMS.***Antirrhinum* Cuttings.**

Can cuttings of *Antirrhinums* be taken in September? If so, when should they be put in their proper places for blooming?

Cuttings may certainly be taken, although it would be better if they had been done earlier. Place them out in the spring, in March or April. They are evergreen, but somewhat tender. They are best raised from seed.

Antirrhinums from Seed.

When is the correct time to sow seed of *Antirrhinum* to be grown in the garden?

This may be sown at any time in the early spring, and, as a rule, the sooner the better, in a gentle warmth.

Cutting-down Antirrhinums.

If *Antirrhinums* are cut down in autumn, will they come up and make a good show next season?

These should not be cut down in the autumn. This had better be done in spring.

Moving Antirrhinums.

Some dwarf *Antirrhinums* were sown last spring. Can they be removed in October with a view to bedding them out for the following summer?

These plants may be taken up as suggested. If it is not then convenient to place them in their permanent quarters, plant them closely on a sheltered border, where they will probably survive the winter.

Perpetuating Choice Varieties.

How can I perpetuate some choice varieties of *Antirrhinum*—by seeds or cuttings?

The best means of perpetuating any choice varieties is by means of cuttings, formed of the sideshoots. These should be taken early. If left till the autumn they will need some bottom heat and considerable care.

Wintering Antirrhinums.

I have some fine striped *Antirrhinums*, which I wish to keep for next year. Will they stand the winter as they are, or should they be lifted and put in a frame?

If the winter proves at all severe, the plants will probably perish if in the open ground. The safest plan will be to lift them, pot them carefully, and winter under glass.

AQUILEGIAS.

Aquilegia Culture.

Is there any difficulty in growing *Aquilegias* (*chrysantha* and long-spurred hybrids)?

Nothing could be more simple than the culture of these plants. They will grow and bloom in any position, in sun or shade. Sow in boxes in a frame, about July or August, and plant the seedlings out in the spring, but, if fairly strong, they will stand the winter outside. If sown early, they will bloom freely the next year.

Aquilegia Seedlings.

When should *Aquilegia* seedlings, sown in September, and now (February) about an inch or so high, be thinned out or potted up? They are in a cold greenhouse.

The plants should be larger than described by this time. Better prick them out into good-sized boxes of fresh soil, at once, and in about two months they ought to be fit to plant out.

Raising from Seed.

How can I raise *Aquilegias* from seed? I have seed-boxes, but no glass. Sow in boxes or pans of light, loamy soil, in a cool frame, in March or April; or, towards the end of April, in a sheltered, half-shaded bed of fine soil in the open, and transplant as required.

Soil for Aquilegias.

What soil is best to grow the new long-spurred Aquilegias in?

Any good, loamy soil, not too heavy, with some leaf-mould or old hotbed manure worked in, will grow these beautiful plants to perfection.

Watering Aquilegias.

Do Aquilegias require much or little water?

On the whole, these plants require a rather liberal allowance of water, particularly in dry seasons.

ARALIAS.**Aralia Afflicted with Green-fly.**

The sprouting young leaves of a fine Aralia in a south window are infested with green-fly. What is the best cure?

Dust the leaves occasionally with tobacco-powder or snuff. Better still, use the infusion recommended for green-fly. Dip the plant in it overhead, and syringe with pure water half an hour afterwards.

Aralia Culture.

What can be done to keep an Aralia in good health, and induce it to grow strongly?

When the pot is full of roots, and the plant in full growth, some weak soot-water, guano-water, etc., should be given occasionally. Water only when the soil becomes slightly dry; and once a week sponge the leaves gently.

Aralia Dying.

An Aralia has stood in a large pot in a sunny window in a cool sitting-room. It has been watered when needed; otherwise, nothing has been done to it. It has hitherto been done well, but now the leaves are dying and falling off. Can anything be done for it?

The ordinary Aralia Sieboldi, sometimes known as the Fig-leaved Palm, is one of the most easily-grown plants. It has probably been either under or over-watered—most likely the latter—and when the soil becomes sour from this cause, the plant goes off rapidly. If it is still alive in April, repot it in fresh soil, but otherwise it would be better to throw it away and buy a fresh one.

Leaves Falling.

The leaves of an Aralia Sieboldi turn yellow, one by one, and then drop off. It is in a room with a west aspect, without gas. What causes the leaves to fall?

The dropping of the lower leaves is frequently caused by careless or irregular watering; but sometimes it arises from lack of nourishment at the roots.

Potting Aralias.

When is the best time to repot Aralias, and what soil is most suitable?

In the spring, about April, is the best time to repot. Use a mixture of fresh loam, with some leaf-mould and sand. Drain well, and pot firmly.

Replanting an Aralia.

I have an Aralia, nearly six feet high, in a small box. Would it do better in a pot? If so, what is the best size?

This might be better in a pot, but replanting it may cause the loss of some of the lower leaves. A pot 10-in. or 11-in. in diameter would suit.

Striking Cuttings.

How can I propagate *Aralia Sieboldi* in winter? Will the small offshoots strike without heat?

Cuttings of the sideshoots will root in sandy soil, under a bell-glass or handlight, in a greenhouse in the spring, but we would not attempt them in winter without heat.

ARAUCARIAS.***Araucaria* Leaves turning Brown.**

What is the reason the leaves of an *Araucaria* turn brown and gradually die off? It is kept in a room, and watered occasionally; it has recently made a fresh tier of leaves. The bottom tier has completely disappeared, and the next tier has started to go in the same manner. It looks healthy.

These plants almost invariably behave like this, especially when grown in a room; as fresh branches are produced at the top, those at the bottom die off, as described. The only means of minimising the evil, which cannot be avoided, is to give water very carefully, and use some weak liquid manure occasionally.

***Araucaria* Overgrown and Leggy.**

In a pot I have an *Araucaria excelsa*, which is very tall and leggy. If cut down, will it break again from the main stem; or will the top strike, if I plant it?

It is exceedingly doubtful whether this plant will ever grow again from the base if cut down—particularly as it is not healthy. Nor will the top strike, unless, perhaps, if inserted in a warm house or pit, and treated with the greatest care.

Cuttings or Seedlings?

Can *Araucaria excelsa* be successfully grown from seed? Is this method of propagation preferable to striking cuttings?

This plant may be, and frequently is, raised from seed; but though seedlings make more vigorous plants, they do not display their true character so soon, nor form such ornamental plants in the young state, as those raised from cuttings.

Methods of Propagation.

Please tell me how the *Araucaria* is propagated?

This handsome plant is propagated from seed; also by means of cuttings of the small sideshoots, or branchlets, which, if inserted in well-drained pots or pans of very sandy peat, kept cool for a time, and then plunged in a gentle hotbed, will form roots and make good plants if due care is afforded; but such work is rather beyond the ordinary amateur.

Raising from Seed.

I have a propagator, and wish to raise *Araucarias* from seed. What is the treatment?

Sow the seed thinly in well-drained pots or pans of very sandy peat, and plunge in a hotbed, or place in a propagator, in the spring. If sound and fairly fresh, it will germinate in the course of a few weeks. When a few inches high pot the plants off singly, and grow them on, at first in a moderate warmth and afterwards in a cool house.

ARBUTUS.

Arbutus unedo for a Shrubbery.

I have been advised to plant an *Arbutus unedo* in a small shrubbery. Will you tell me when it blooms, and how high it grows?

This handsome evergreen shrub grows to a height of about eight to twenty feet. It bears flowers in clusters in September, and these are succeeded by scarlet fruit like Strawberries, whence the tree is sometimes called the Strawberry tree.

Soil for Arbutus.

Is a special soil required in which to plant an *Arbutus*?

This plant thrives in any good, loamy soil. Very little manure is required.

Sowing Arbutus Seed.

Would you kindly tell me how and when to sow *Arbutus* seed?

Rub the seeds out in a little fine sand (drying the whole gently first, if necessary), and sow in spring, sand and all, in a box, or pan, of light soil, placed in a gentle hotbed, or on a greenhouse shelf. Transplant the seedlings subsequently, as required.

When to Prune.

My *Arbutus* has grown very tall. It has not often been cut back. When is the best time to prune it?

This should be done in the spring, just as the new growth is commencing. As a general rule, the less it is pruned the better—it is far more beautiful when allowed to grow naturally

Winter Treatment.

Is it necessary to protect an *Arbutus* during winter?

In mild districts, and where planted in a sunny, sheltered position, this shrub will go through the winter safely; but if the aspect is exposed and bleak, or the locality unfavourable, it is advisable to give it protection in winter.

ARUMS.

Arum cornutum.

Can you tell me anything about the *Arum cornutum*, a bulb which grows without soil or water? I have had one exposed in a window in a warm room for more than a week, but I do not see any signs of life.

If you have the true species mentioned, the bulb will hardly fail to throw up its curious, reddish-brown flower (shaded with yellow) in due course. Place it in a saucer, with a little water, or damp it frequently overhead with a brush dipped in water—the bulb may have become over-dried. After flowering, place it in a 6-in. pot, with any good, light soil, and water freely during growth. Towards the autumn dry it off, and the bulb will flower again in the same manner next spring.

Arum dracunculus.

What sort of flower is borne by *Arum dracunculus*? When is the best time to plant?

Arum dracunculus should be planted in the autumn, in a light, warm soil. The flowers of this curious plant are dark, reddish-purple, shaded with black. They are very large and handsome, in form like a huge but rather elongated ordinary *Arum Lily*, but when first expanded they emit a most unpleasant perfume.

Arum Lilies Falling.

Most of the Arum Lilies in my cold greenhouse have died off, the leaves becoming soft, gelatinous, and rotten. There is only sufficient heat to keep out the frost. Can you tell me the cause of the trouble?

This is probably due to the want of sufficient warmth to keep the plants growing healthily, and it is also probable that at some quite recent period they have experienced a touch of actual frost. Though nearly hardy, these plants require a temperature of fifty-five to seventy degrees, in order to grow and flower well during the winter.

Arum Lily after Flowering.

What should be done with an Arum Lily after the blooming season?

After flowering, the plant should either be gradually dried off, and stood out of doors to ripen; or else be planted out in good soil, with a kind of basin round it, to hold water, when, if this is freely supplied, it will make a vigorous growth, and can then be lifted and potted in the autumn.

Black Arum.

What treatment is required for the Sacred Black Lily of Jerusalem?

The bulb of this plant, which is known as *Arum palæstinum*, or *sanctum*, should be potted as soon as purchased, using a good-sized pot, with free drainage, and any light, loamy soil, with a little leaf-soil and sand. Keep the soil on the dry side until plenty of roots have been formed, and the plant is well in growth, when a liberal supply of water should be given. It may be planted in good, light soil at the foot of a south wall in the open air. A light and sunny position is necessary.

Culture of Dragon Arum.

I have had one of these plants for two years. It has lately flowered. I had watched the unfolding of the bud with much interest, but on opening the greenhouse one morning perceived an overpowering odour, which I at first thought was owing to a dead rat or mouse, but soon found proceeded from the Lily, which was fully expanded. I had to put it outside, but by the next day the odour had left the flower. I have kept it in a warm house, and watered it freely, but though the blossom is a fine one, the foliage is, and has always been, rather yellow and sickly-looking. Have I treated it correctly?

It is natural for this plant to emit the abominable odour described for the first day or two after the blossom expands. The object is supposed to be to attract flies, which fertilise the blossoms. It is a native of Southern Europe, and is known botanically as *Arum dracunculæ*. You have treated the plant quite correctly; but as the foliage fades less and less water should be given.

Repotting an Arum.

In what way should an Arum Lily be repotted?

Shake away nearly all the old soil, and repot in a mixture of fresh loam, leaf-soil (or well-decayed manure), and sand, providing free drainage.

Separating Young Arums.

How and when should I separate the young plants of an Arum Lily from the parent?

Separate the crowns in the usual way, pulling them apart, and using a knife if necessary. This should be done in the spring, never in autumn.

ASPIDISTRAS.***Aspidistra* Culture.**

What is the best course to pursue, to produce nice, green plants?

If you want green plants, pot them in rich soil, and give plenty of water. If nicely variegated ones are desired, use rather poor soil, and water sparingly.

Aspidistras Failing.

An *Aspidistra* was repotted in October. The soil was brought in from the garden. The leaves have since turned a faded green, starting from the top, downwards. Would the temperature of the soil have anything to do with the failure?

These plants should not be repotted in the autumn. The temperature of the soil would hardly produce this effect, but it might not have been of a suitable nature. Keep the plant on the dry side during the winter, and repot in proper compost in April.

Aspidistra in a Sunny Window.

Will an *Aspidistra* thrive in a window which has the sun full on it a great part of the day?

These plants are of a very robust and enduring nature, but it is advisable to shade them lightly from hot sun during the summer months, to prevent scorching the leaves.

Aspidistra Leaves Splitting.

What is the cause of the leaves of an *Aspidistra* splitting?

This fault arises from defective root action, owing to unsuitable or sour soil, defective drainage, or the like. Give two or three doses of lime-water, and some time afterwards a weak solution of nitrate of soda and soot-water (weak) alternately, a few times.

Leaves turning Brown.

What is the cause of the leaves of an *Aspidistra* turning brown at the tips?

This appearance indicates that there is something wrong at the roots—it may be that the soil is unsuitable or exhausted, injudicious watering, and the like.

Pot-bound Plants.

My *Aspidistra* is not looking very healthy. It has been in a 5-in. pot for five years. Do these plants get pot-bound?

These plants require repotting occasionally, and yours is certainly pot-bound. Repot it into a 6-in. pot without loss of time, using some fresh soil.

Repotting Aspidistras.

When is the best time to repot *Aspidistras*?

Any time in the spring will do for these plants. See that they are properly watered before repotting, loosen the roots out, and pot firmly. Good loam and a liberal addition of manure will suit them.

Re-variegating Aspidistras.

How is it possible to re-variegate an *Aspidistra*, the leaves of which have turned quite green?

It is quite impossible to restore the variegation to one of these plants that has reverted to the plain or green form. Once they become green, they remain so, as a rule, though the variegation occasionally breaks out afresh when the plants are starved. The cause of the loss of variegation is generally a too rich soil and too much water.

ASTERS.**Asters in a Propagator.**

What should be the temperature for raising Asters in a propagator?

For this purpose, a temperature of fifty to sixty-five degrees is most suitable.

Asters on a North Border.

I have a border on the north side of a Box hedge, where I should like to grow Asters. Will they succeed there?

This position is not a good one for Asters, which like plenty of sun. If the hedge is not too high they may do fairly well, provided the soil is suitable.

Comet Asters in Pots.

What is the best way to grow Comet Asters in pots, to flower in an unheated greenhouse?

The best way to grow the Comet or other Asters in pots is to plant them out of doors in good soil, and when coming into bloom lift and pot the plants carefully.

Diseased Plants.

What is the cause of my Asters being affected with "shanking"? They have been grown under glass.

"Shanking" is a complaint which is very common among seedling annuals grown in this way. It is of a fungoid nature, and arises chiefly from want of fresh air and light. The seedlings should be pricked off into fresh soil as soon as they have made three or four leaves apiece, stirring the surface occasionally; a little lime is also very beneficial. The English or Quilled Asters are more robust in growth than the others, and seldom suffer from affections of this kind.

Soil for Asters.

What soil is most suitable for seedling Asters?

We always use a mixture of about three parts of fairly light loam, two parts of leaf soil, and nearly a part of sand, and find this answers admirably. If any manure is used, it must be very old and well-decayed.

The Best Strains.

What are the best strains of Asters?

These are now almost innumerable, but the Dwarf Chrysanthemum-flowered, the Victoria, and the Comet, are usually found very satisfactory.

AURICULAS.

Auricula Growing Lanky.

How would you treat a show Auricula which has grown lanky, and has several offsets at its base?

Take off the offsets, if they are large enough, and insert them in a well-drained pot of sandy soil, as cuttings; and then replot the old plant, burying it right down to the leaves.

Auricula Seedlings.

Is the month of June too late to sow Auricula seed, to get flowering plants for the next season?

Seed may certainly be sown in June, though it is scarcely a good time. The plants thus obtained will not flower next season, even if the seed germinates promptly, which is doubtful, as last year's seed will be stale or dry then, and unless the soil is kept very regularly moist the plants may not appear for months. It is best to sow the seed of Auriculas in the late summer, as soon as it is ripe, or early in the spring—March, or early April, when most of the plants will flower the following season. Keep the pans or boxes in a cool, shady frame or pit, and the soil always just moist, and when the little plants appear, prick them out singly, finally potting them into 3-in. or 3½-in. pots, in which they will bloom the first season. A light, sandy loam, with about half the quantity of leaf-mould, will grow these plants well during the early stages.

Characteristics of Varieties.

What are the characteristics of true Show and Alpine Auriculas?

The Show Auriculas produce flowers of many shades of colour, but are all edged or bordered with a more or less narrow band of white, green, or grey, while the Alpine kinds are frequently pure "Selfs" (except for the yellow eye), and are also hardier, and have less "meal" on the foliage than the others.

Fertilising Auriculas.

Which is the best way to fertilise the blossoms of Show Auriculas?

These flowers seed very freely, as a rule, but, in order to ensure a good crop, you may just "dab" the pollen from the anthers on to the stigmas, using a small, soft brush. If you wish to cross-fertilise them, the pollen from one flower must be transferred to the stigmas of another, taking care that the latter does not become self-fertilised with its own pollen.

General Culture.

Please tell me how Auriculas should be treated in a general way?

These plants must be kept cool, with plenty of air in all fine or mild weather. During the winter and spring, till the flowers are over, the choicer kinds should be kept in a cool frame or pit, but after flowering stand them on ashes, in a shady spot out of doors, till the autumn.

Propagation from Offsets.

What is the method of propagating Auriculas from offsets?

These should be taken off when repotting the old plants, in May, June, or September, placing them at first in quite small sizes (2-in. or 2½-in.), and subsequently shifting them into larger pots as required. Any light mixture of fine, loamy material, with some leaf-mould and sand will suit them.

When to Sow Asters.

When is the best time to sow the seed of Asters? Is artificial heat required?

The seed of Asters should not be sown until about the end of March. Heat will be necessary, but when the plants are well up and pricked off, this can be dispensed with.

AZALEAS.**Azaleas from Cuttings.**

When and how should cuttings of *Azalea mollis* be taken?

These will strike readily if taken off in the spring, and inserted in pots of sandy soil. Keep them warm and moist.

Azalea indica after Flowering.

The *Azalea indicas* in my greenhouse were not properly attended to after flowering last year. Will you let me know the correct treatment?

Keep them reasonably warm and close in a low house or pit, syringe them frequently overhead, and give water and weak liquid manure at the root freely. Any repotting should be done directly after flowering. A light shade from hot sun is also necessary. When the growth has attained a length of some inches, and the embryo flower-buds can be felt in the points of the stronger shoots, the plants should be gradually hardened off, giving more air and less water. Stand them out in the open air for a month or six weeks in August and September, and house them again before the first frosts come.

Azalea indica Dropping its Leaves.

A few weeks ago I procured from a distance some *Azalea indica* plants, and put them in a house at fifty degrees. When potting them, and still, if shaken, they shed their leaves, which are very green and healthy-looking. What is the reason for their doing so?

These plants always lose some of their foliage after the strain of the removal, journey, and potting, but perhaps these got too dry at some time or other, which would make it worse. Keep them close—the temperature named is just right—see that they are sufficiently moist at the roots, sprinkle them gently overhead occasionally, and shade them from sun.

Azalea indica Out of Doors.

Would *Azalea indica* succeed if planted in the open ground, with some protection in winter?

Although these plants will endure a few degrees of frost for a short time without injury, they cannot bear any severe or prolonged cold.

Azalea mollis after Flowering.

What is the treatment of *Azalea mollis* after blooming?

Trim the plants up a little when the bloom is over, and then repot them, if necessary, or at any rate remove some of the surface soil, and top-dress with fresh soil. Keep them standing out of doors all the summer, on ashes in a warm and sheltered position, and see that the roots are duly supplied with water. House them in September or early October.

Azalea pontica.

I have some *Azalea pontica* which have flowered in my greenhouse. I should like to put two on a grave. Will they grow outside?

These plants are quite hardy; but if they are to do well, they should have a light, peaty soil to grow in.

Cutting-back Azalea mollis.

My *Azalea mollis* has blossomed well. To ensure good blooms next year, how far should it be cut back?

This should have been done directly after flowering. If you cut back the plant now (August), it will probably fail to bloom next year.

Outdoor Treatment of Azalea mollis.

In the autumn I planted some *Azalea mollis* out of doors. They have bloomed splendidly. Should I now put them in pots over the summer, or will they bloom again next year if left where they are?

These plants had better be left alone, and they will flower well next year.

Period for Flowering.

What is the flowering period of the *Azalea mollis* in a cool greenhouse? In April and May, a little earlier or later, according to locality and season.

Pruning Azaleas.

Is it advisable to prune Azaleas which are planted out?

It is a common practice to trim these plants up a little in order to keep them in shape; but beyond this they require very little pruning, properly so-called, although when they attain an unwieldy size they should be headed-back severely.

Soil for Azaleas.

What is the cause of the dropping of the young leaves of Azaleas, potted in the greenhouse, the compost consisting chiefly of fertilising moss?

You do not state whether the Azaleas are of the *indica* or *mollis* sections. However, the fertilising moss is useless for either, and accounts for the failure directly. Only good peat and sand must be used for the Indian varieties, and good, light loam and leaf-mould for the *mollis* kinds.

BALSAMS.

Balsam Culture.

A Balsam is now growing in a greenhouse, which is heated when necessary. How should it be grown to make a specimen plant?

Any good, light, loamy soil will grow it, and it enjoys plenty of warmth and moisture. Fine, large specimens may be grown in an 8-in. or 9-in. pot.

Balsams as Standards.

I should like to grow Balsam Sultani in standard form. Is it possible to do this?

The natural habit of this plant is bushy. We have never known it to be grown in the form suggested, and should not think it an easy matter to do so.

Balsams in Winter

I have plants of B. Sultani in "forty-eight" pots. Does it die down in winter?

This plant (*Impatiens Sultani*) is a greenhouse perennial, and may be grown on to a considerable size, or bloomed in 5-in. or 6-in. pots, as required. It does not die down, but if kept in a genial temperature, keeps on blooming through the autumn and part of the winter.

Buds Dropping.

I have some Balsams in a vinery. The buds fall off just before they expand. Do they require stopping?

Balsams are half-hardy or tender plants. A vinery is not a good place for them, as they do not get enough light. Perhaps your plants are starved, or do not get enough water. They should have plenty of liquid manure when the pots are full of roots, with frequent overhead syringings. If well grown they do not require to be stopped.

Sickly Plant.

I have a Balsam in a greenhouse, where the temperature is never under seventy degrees. It has plenty of water, but the plant droops. The leaves and bloom have not faded, but seem to lack strength to hold themselves up. Does it require repotting?

It would be worse than useless to repot a plant in this state. It has probably been overwatered; keep it on the dry side at the root for a time, but sprinkle it frequently overhead. Balsams require plenty of free light and sun at all times.

BEGONIAS.

Culture.

A Question of Floriferousness.

Will the tubers of Begonias, flowered in pots, be as floriferous next year as they have been this year?

Yes; these plants usually produce more blossoms the second year than the first, but they are not so large.

Begonias following Bulbs.

I have a bed of late-flowering Tulips, which I wish to leave in. What could I plant to follow them, which would be bright and fairly low-growing?

Nothing would be more suitable than Begonias, which, if planted shallowly, would not harm the Tulips. Small tubers or young plants would be best. If the ordinary tuberous Begonias are not wanted, try some of the fibrous-rooted kinds, such as *Begonia semperflorens* in variety.

Begonias for Bedding.

For bedding purposes, which would be more effective—single or double Begonias?

Without doubt, single Begonias are better for the purpose indicated.

Buds Dropping.

Some double Begonias showed plenty of bloom up to a certain point, when the centre buds, before opening, dropped off. What is the cause of this?

Keep the plants growing on healthily, in a sweet, porous, well-drained soil, with a due supply of water, and there will be very little bud-dropping. But these are somewhat curious plants, and at times, with every care and attention, they will drop, in spite of everything.

Colours for a Border.

What two colours in Begonias would go well with a border of mauve Violas?

We should think that salmon-pink and yellow Begonias would blend well with the colour named.

Drying-off Pot Plants.

A tuberous Begonia, grown in a pot during the summer, has been kept on the dry side for a week or two. Will the stem in time fall off, like the leaves, or should it be cut off?

The stem of this plant will fall quite naturally, presently; do not cut it down. Keep the soil almost dry.

Flowers Falling.

The flowers of some Begonias seem to expand to the full, and then fall off. The leaves also appear to be withering. They are potted in leaf-soil and silver sand, and have been watered twice weekly with rain-water, and with soot-water occasionally.

There would be hardly substance enough in the soil; some loam should have been added. Twice a week would not be often enough to water; in fine weather they want it every day, and if the pots are full of roots they may require it twice in very bright weather. Insufficient water is probably the chief cause.

Indoor Culture.

Last year I started some tuberous Begonias in Cocoanut fibre, and then had them potted up. They grew very spiry, the flowers were small, and many dropped off in bud. Those planted out of doors did well.

Little difficulty ought to be experienced in growing these plants in a well-managed greenhouse. The culture must have been at fault somewhere. It is better to start the tubers in small pots of a light compost of loam, leaf-mould, fibre, and sand, not in fibre only; and the proper soil to pot them in subsequently is a mixture of about two parts of rough, fibrous loam, to one part of leaf-mould, some sand, and a dash of bonemeal. Pot fairly firmly, and drain the pots well. The subsequent watering is a rather delicate matter—none should be given until the soil in the pots becomes moderately dry. Keep the plants up near the glass, and ventilate evenly. They are certainly less troublesome when planted out of doors. Plant the old tubers out of doors this season, and procure fresh ones for the greenhouse. All require the same treatment, but one-year-old tubers are the best.

Leaves turning Black.

What causes the leaves of a Begonia to turn limp and black? The end of the leaf is first affected, but the trouble soon spreads to the whole.

This is the effect of a lack of healthy vigour at the roots, caused by unsuitable soil, insufficient drainage, and the like. Healthy plants are never attacked in this manner.

Preserving the Tubers.

Is it possible, without a greenhouse, to save tuberous Begonias which have been bedded out?

As soon as the tops have been nipped by the first frost, take up the tubers, and pack them closely in boxes, but do not attempt to clean them—leave some soil on each, and rub it off when it has become dry. The tubers may then be stored in a box or other receptacle. A spare room or cellar would do to keep them in; but do not put them in a very warm or dry place, nor where frost can reach them, or they will perish.

Saving Pot Plants.

What should be done with Begonias that have bloomed in pots outside?

Take them in directly the tops are touched by the first frost; dry them off gradually; and then shake out the bulbs, and store in a frost-proof place for the winter.

Planting and Propagating.

Begonias Starting.

My Begonias have been in a box of ashes all the winter. I recently put them in a box with some mould at the bottom, in a greenhouse. They have just started shooting out—is that what they should do?

This is quite right. When fairly on the move, pot them singly, and grow on in the usual way.

Distance Apart.

What distance apart should Begonia tubers be planted?

If the tubers are of a good size, they may be placed about a foot apart, but, if small, somewhat closer.

Division or Cuttings?

Do plants propagated by division of the tubers give as good results as those by cuttings?

There is really very little difference, but we should prefer the cuttings.

Propagation by Cuttings.

What is the process of propagating tuberous Begonias by cuttings?

The best cuttings, and those usually employed, consist of the shoots produced from the base of healthy plants during the flowering season. If these are taken off, each with a slight "heel," trimmed, and inserted in well-drained pots of very sandy soil, these being plunged in a gentle bottom heat, and loosely (not too closely) covered with glass, and shaded, they will usually form roots, and make good plants. The tops and sideshoots of the plant, after flowering, are also frequently employed. There is no necessity for sideshoots to possess a dormant eye at the base, though they usually do.

Raising Seedlings in a Propagator.

In raising Begonias from seed, by means of a propagator and cold frame only, should the pricking-off be done outside in the open air when there is no greenhouse?

The little Begonias must not be pricked out in the open air; it should be done in the house—in a fairly warm room.

Starting Pot Plants.

Some Begonia bulbs have just started to grow. They are in pots which are half filled with loam. Should I gradually fill the pots as the plants grow, and then place the bulbs on top, and not cover them?

Unless the pots are large ones, which is unlikely, do not disturb the bulbs, but top-dress with fresh compost when a little growth has been made.

Time for Planting.

What treatment is necessary for a number of *Begonia* tubers which I want for bedding-out in June? Should they be started in a frame?

You may start the *Begonias* in the frame in April, and plant them out when in growth in June. A much simpler method is to keep them quite cool and dormant until about the middle of May, and then plant them out directly, where they are to flower, like so many Potatoes, placing a few inches of litter over the bed after planting. If started in the frame in pots, or boxes, they should be kept almost dry at the root until well in growth, but be freely sprinkled overhead on fine days.

Fibrous-rooted Section.

Culture of *Begonia semperflorens*.

I have a number of *Begonia* Vernon, as an edging to a bed of large *Begonias*. What treatment do they require to bring them on?

This is a variety of *B. semperflorens*, with bronzy foliage and crimson blossoms. Being of a dwarf habit, it makes an excellent edging for a bed of tuberous *Begonias* or other plants. In order to promote a satisfactory growth, the soil in which the plants are growing must be kept constantly moist, and a little liquid manure may be given occasionally; a solution of nitrate of soda, one ounce to the gallon, is a good stimulant, but sprinkle the plants with pure water afterwards.

Cutting-back Old Plants.

Should old plants of *Begonia manicata* be cut back at the end of the year?

It is better to cut these plants back in the spring, just as they are commencing to grow again, than in the autumn, although they might be trimmed up a little then, if necessary. Reduce them more or less, according to the size of plant required.

Propagating *Begonia manicata*.

How and when should cuttings of *Begonia manicata* be taken and struck?

The spring or early summer, when the plants are breaking into fresh growth, is the best time to strike cuttings of this plant. Trim off the lower leaves, and insert the cuttings in small pots of very sandy soil (loam, leaf-mould, and sand), and plunge them in a gentle hotbed, if possible, or keep them close and shaded in a warm house.

Raising *Gloire de Lorraine*.

What is the best way to raise winter-flowering *Begonias* (*Gloire de Lorraine*)? Are they propagated from cuttings or raised from seed?

Most of the winter-flowering *Begonias*, including the one named, are raised from cuttings, which are struck in a propagating case, with hotbed, in the spring. The "*Gloire*" seldom produces any seed.

Wintering *Begonia semperflorens*.

What should be done with a number of *Begonias* of the *semperflorens* type in the winter?

These plants should be wintered in a rather warm greenhouse, or intermediate house. Cuttings should be taken from them in the spring.

BERBERIS.

Aspect and Soil.

Will *Berberis aquifolium* succeed in a shady position facing north, on a rather heavy soil, with stiff clay subsoil?

Yes; this plant does fairly well in the shade, and in a rather heavy soil.

Berberis Darwinii from Seed.

I have some seedlings of *Berberis Darwinii*. Will they flower in due course?

These plants are usually increased by means of cuttings inserted in sandy soil on a sheltered border, or in a frame, in the autumn. They may be raised from seed, but seedlings are apt to vary a little in character, although they make fine plants. They will flower in time.

Berberis from Suckers.

I wish to increase *B. purpurea* and *stenophylla*. Both send out good suckers; if cut off and planted, will they flower properly, as the suckers are already well rooted?

Strong suckers might strike root if not too "soft," but the best way would be to take them as low down as possible, and if you could get a few roots to each, they would soon become established.

Habit and Height.

Is the *Berberis* a suitable subject for a border on a lawn? I want an evergreen shrub, not too tall.

The *Berberis* should meet your requirements. It is an evergreen flowering shrub, which seldom exceeds four feet in height.

Propagating Berberis.

What is the best method of propagating *Berberis Darwinii*?

By means of cuttings of the young shoots of the past season, inserted in sandy soil in a frame in October or November; or it may be raised from seed.

Pruning Berberis.

Please inform me the right time to prune a hedge of *Berberis Darwinii*?

This should be done as soon as the flowers are over, in the early summer.

BRUGMANSIAS.**Brugmansia Out of Doors.**

A *Brugmansia Knightii* has bloomed all the summer in a pot in the open, and has grown very tall. Will it hurt to leave it out all the winter?

This plant should be taken up and brought into the greenhouse in autumn. A sharp frost would kill it.

Brugmansia suaveolens.

Can you give me particulars of the culture of *Brugmansia suaveolens*?

Brugmansia, or, as it is now more generally termed, *Datura suaveolens*, is an evergreen, greenhouse shrub, a native of Peru, and produces large, trumpet-shaped, white blossoms, highly fragrant. It succeeds under ordinary cool greenhouse treatment. It requires a rich, loamy soil, fairly large pots, and plenty of water during the season of growth. The wood made must be thoroughly ripened by free exposure to fresh air and sun during the late summer and autumn, or the plants will not bloom well. Any potting required is best done rather early in the spring, as soon as the new growth commences, using a mixture of light, loamy soil, with about a third part of old hotbed manure or leaf-mould, and a sprinkling of bonemeal, soot, and sand. Drain the pots well, and make the soil quite firm. Encourage growth by means of a genial temperature, frequent syringing, and plenty of water after the fresh soil is well occupied with roots. Liquid manure may also be given when this stage is reached. Towards the autumn, stand the plants outside, in a sheltered, sunny spot, but house them again before frost, and keep cool and airy through the winter.

Leaves Falling.

I have a *Brugmansia* about a foot high, which started well, but now sheds leaf after leaf. I have kept it watered. It is in a greenhouse, with heat at night and during frosty weather, the temperature never falling below forty-eight degrees. Can you account for the trouble?

These plants are rather apt to lose their leaves in the manner described, especially if over-watered in any way. They require fairly free supplies of water while actually in growth, but at other times keep the soil rather on the dry side. They do not bloom very freely in the young state, as a rule; grow your plant on, giving it a moderate "shift" annually, and in due time it will doubtless flower satisfactorily. The temperature named is, if anything, too high at this season (January)—forty to forty-five degrees at night would be ample.

Pinching-out.

A *Brugmansia Knightii* is about two feet high, main stem one and a half inches round. Should the top be pinched out, and two shoots which have started at foot of the stem be rubbed off?

If a bush plant is desired, the point of the main stem must be pinched out. Do not remove the shoots at the base, but let them grow, and if the top becomes straggling, or unwieldy, it can be cut away entirely, and the other shoots utilised to form the plant.

Promoting Bloom.

I have a healthy *Brugmansia Knightii*, about three feet high, and have just pinched the top out of two main branches. How can I make it bloom?

Ripen the growth well by exposing the plant as fully as possible to the fresh air and sun. In the culture of this kind of plant the chief points are to promote a vigorous, healthy growth, and then to ripen or mature it as fully as possible.

Striking Cuttings.

Can cuttings be taken of a *Brugmansia*? If so, how should they be struck?

Few things of this class strike more readily. Take off any healthy tops, or sideshoots, about four inches long, and trim off the lower leaves. Insert them singly in small pots of loam, with plenty of sand and a little leaf-mould added, plunging them in a gentle hotbed, or placing them in a warm house, and keeping them close, moist, and shaded till rooted.

BULBS.**Bulbs under Shrubs.**

I have a common *Fuchsia* outdoors which does not come up till late the spring. If bulbs were planted under it they would look nice when in bloom, and the foliage of the *Fuchsia* would hide them later. Would *Crocuses* and *Snowdrops* do?

This is a very good idea. The bulbs mentioned would brighten up the bare places nicely in the spring.

Distinguishing Bulbs.

How can I tell the bulbs of (1) *Madonna Lily*, (2) *Crown Imperials*, and (3) *Hemerocallis*, from others mixed in a heap—I want to sort them?

It is not an easy matter to accomplish this, unless you know them. The bulbs of the first are white and pointed, with rough scales, those of the second being flatter and smoother, but the third (*Day Lily*) has no proper bulb, only a thick, semi-tuberous root. Perhaps the *Hemerocallis* is what is meant, and, if so, these have larger, irregularly-shaped bulbs.

Lifting Bulbs.

Can I lift bulbs when they are in flower, and put peat or fibre round them, in order to send them away?

You can lift the bulbs and pot them, using either peat or Cocoanut fibre round them, but the flowers will keep as long, or longer, if cut and placed in water.

Manure for Bulbs.

I have some borders planted with bulbs which did not flower very well in the spring. Will it be right to lay some cow manure on the top in October, and fork it in after a month?

Yes; a moderate quantity of cow manure may be applied in the manner mentioned, or some good artificial be used.

Moss Litter for Bulbs.

Will fresh moss litter peat, in powder, answer the same purpose as Cocoanut fibre for raising bulbs?

The finer portions of peat-moss litter may be used as indicated; but it should be borne in mind that this material is prepared from hog peat, which is somewhat sour and unwholesome as compared with Cocoanut fibre. Some little time before using, sprinkle a little lime on it, and take care to reject the fibrous portions, which are distasteful to the roots of plants of all kinds.

Plants to Grow with Bulbs.

What small, low-growing plant can be used as a groundwork when various bulbs are growing in the spring?

The best plants for this purpose are Alyssums, Aubrietias, and Silenes, all of which may be planted in October.

Plunging Bulbs.

How high should the shoots of bulbs be before the pots, which have been plunged, are brought to the light?

If plenty of roots have been formed, the bulbs may be taken out of the bed as soon as they fairly begin to start—when about one inch of growth has been made would be a good stage.

Transplanting Bulbs.

As it is inconvenient for me to plant my spring-flowering bulbs in the border in good time in the autumn, would it be practicable to plant them in boxes in fibre, and transplant, when nearly flowering, into pots and borders?

It is quite possible to proceed as you propose, and, in fact, it is a common practice with growers for market to grow bulbs entirely in boxes, lifting and potting them when just expanding, as by this plan more even potfuls are secured, while the slight check imparted prevents the flowers expanding too rapidly.

Treatment of Potted Bulbs.

I have a number of bulbs of various sorts, which have flowered this spring in pots in a greenhouse. Must they be thrown on the rubbish heap, or could I plant them in grass under trees in a wilderness garden?

These bulbs are quite suitable for planting in any spare or waste places, as suggested. It would be a pity to consign them to the rubbish heap. Take care that they do not become unduly dried, or shrivelled, in the meantime, and plant them in September.

CACTI.

Cactus Culture.

What proportion of silver sand, good loam, and mixed broken bricks and mortar should be used for the soil for Cacti?

A good compost for these plants consists of about equal parts of loam, leaf-mould, peat, old mortar (crushed), and sand, but rather more loam may be used, especially if this is of a light description.

Cactus Cuttings.

When is the best time to take Cactus cuttings, and how?

This should be done in the late spring or summer, taking any sideshoots or other pieces of the *old* stems, not the new growth. Insert them in pots in a mixture of loam, leaf-mould, sand, and mortar-rubbish (crushed), and in any warm, light place very few will fail to form roots.

Cactus Failing.

A Cactus, in the greenhouse, seems very healthy, but has no bloom. It is in a shaded position. Is this the cause of its failure?

The plant requires a more sunny position. The secret of growing these plants well is to use good soil; to give very little water during the winter, but plenty in the summer; and to expose them fully to the sun, with fairly free ventilation.

Raising from Seed.

I wish to grow Cacti from seed. Is there anything difficult in the process?

This is a comparatively simple matter. The seed should be sown in well-drained pots or pans. Place these in a good, steady hotbed, in a propagating case, or in any well-heated house, preferably with a gentle bottom heat. This should be done in the spring, about March, and a square of glass may be laid over each pot or pan, but not too closely, to check evaporation. Keep moist, and give more air when the seedlings appear. These may be pricked off and potted in due course, as required, and, when established, grown on in the usual manner. If the seed is fresh and good, it will germinate in a very few weeks' time.

Repotting a Cactus.

A Cactus is in a pot, measuring fourteen inches across. It makes growth, but has not bloomed. Should it be repotted, or divided up?

The pot seems very large for anything of this nature. If the growths are much clustered, the plant had better be divided into moderate-sized pieces, and placed in 5-in. or 6-in. pots, using good soil. Pot firmly, and drain well.

Temperature for Seed.

What temperature is necessary for raising Cacti from seed?

This may range from sixty-five to seventy-five degrees or so, with five or ten degrees more of bottom heat.

CALADIUMS.

Brown Patches on Leaves.

Some of my Caladiums, although growing well, are disfigured by brown spots which appear on the leaves of the white varieties. A small patch first appears, and this spreads until the whole of the leaf is dead, with the exception of the ribs and stems. The atmosphere is always moist. Can you suggest where the fault lies?

The most probable explanation is that the sun is allowed to shine directly or strongly on the plants while the leaves are covered with spots of moisture, either condensed or from the syringe. This will cause burnt, or, rather, scalded spots in the leaves directly, especially where the house faces south. The leaves of the *Caladium* are of a very delicate texture, and the light-coloured or "white" kinds more particularly. Try shading the plants directly the sun gets on them strongly.

Caladiums Outdoors.

What shall I do with outdoor *Caladiums* in the autumn?

Caladium esculentum is the only outdoor species, the rest being stove plants. Cut away all the leaves but the centre one, and in about a week take up the tubers. Store them in sand in a cool but frost-proof place indoors. They are safest where the thermometer does not fall below forty degrees. Plant them out again in the spring.

High Temperature Necessary.

I have recently purchased some bulbs of *Caladiums*. I have a conservatory with south aspect, but no heat, merely an oil stove to keep out frost. Please tell me how to proceed.

The *Caladiums* are tender or stove plants, requiring a high temperature and moist atmosphere during the season of growth, while the tuberous roots should be wintered in a temperature of not less than fifty degrees. With only an unheated house, you have a very slender chance of succeeding with these tropical subjects.

Moisture on Leaves.

I notice that little drops of water form at the edges of the leaves of my *Caladiums*. If taken off, others appear within a few seconds. Is this natural, or does it indicate too much water at the root?

There is nothing wrong about this. *Caladiums* throw the water off their leaves, and, of course, it collects at the edges.

Winter Treatment of Caladiums.

I have brought some *Caladiums* indoors, for decoration, from the hot-house. When the leaves die down, shall I divide and repot, returning them to the heated house again?

The tuberous roots of these plants should be either shaken out and stored in Cocoanut fibre or sand, or else be kept in the pots, laying these on their sides. Do not divide or interfere with them in any way till the spring.

CALCEOLARIAS.

Calceolarias Failing.

My shrubby *Calceolarias* grow and bloom well up to a certain point, and then a third or more droop and die in a few days, while others bloom well. The soil is light, and rather shallow, over sand. I do not starve them, and nothing else goes off that way. Can you suggest a remedy?

From some unexplained cause, these *Calceolarias* are very liable to go off in the manner you describe, where a light and shallow or poor soil prevails. The only remedy is to dig the ground rather deeply—two "spits," at least—and work in a good layer of short, strong manure (cow manure is the best) between the two "spits." If, then, the plants are got in place early—as soon after the middle of April as the weather, etc., permit—there will be few losses of the kind referred to.

Compost for Cuttings.

What compost is most suitable for striking cuttings of *Calceolarias*?

Almost any light, sweet, sandy soil will do. An excellent compost for this purpose consists of equal parts of loam and road grit, with half a part of leaf-mould, and a little burnt earth, or wood ashes, if available.

Cuttings Outdoors.

I wish to take cuttings of *Calceolarias*, to strike outdoors. I have no frame or greenhouse, but could utilise a spare room for wintering them. When is the best time to take them?

The proper time for this is towards the end of September, or early in October.

Late Cuttings.

I have just pulled up (December) some *Calceolarias*, quite untouched by frost, and laid them in by their heels, under cover. Is it too late to insert strong cuttings with success for spring use (under a frame)?

If the cuttings are taken at once, before they begin to flag, they may form roots yet, but the frame should be kept close, and frost excluded by some means. It is very late, however—they ought to have been inserted some weeks ago.

Pests in a Frame.

Worms and slugs are troublesome to *Calceolaria* cuttings in a frame, the latter pest eating many of the young plants. What would you recommend?

Give the cuttings a light dusting or two with freshly-slaked lime, in powder, and both pests will soon disappear. This is best done at night, when the creatures are out on the surface.

Pinching-out *Calceolarias*.

Is it necessary to pinch out the growing point of *Calceolaria* cuttings if there are plenty of small sideshoots, and will the leading shoot have bigger flowers if left on?

It is not absolutely necessary to pinch out the points of these plants if they are sturdy and strong; but when they run up weak and lanky, with few or no sideshoots, it is very useful. The leading shoot always produces the earliest truss, which is lost by pinching. This is usually the largest as well.

Protecting Plants.

Some *Calceolarias* growing in a border have been cut down to the new growth. Will they survive the winter out of doors?

Calceolarias are almost, but not quite, hardy. The best place in which to winter them is a frame; but, failing that, the plants had better be covered with some light, dry litter, or such like, on the first approach of severe weather.

Repotting *Calceolarias*.

In a small heated greenhouse, some *Calceolaria* cuttings are beginning to make good plants in 3-in. pots. Shall I pinch the top of them now (February) to make them bushy, and what sized pot will they require next?

You may take the points out of these plants, to induce a bushy habit. If they are well rooted out in the pots they now occupy, they may be moved into 5-in. or 6-in. sizes, to flower. Do not stop and repot at the same time.

Saving Old Plants.

I have some fine *Calceolarias* in bloom in the garden. Could I pot them to save for next season?

Do not trouble with the old plants, but take cuttings at the proper season.

Shrubby Varieties from Seed.

Can shrubby *Calceolarias* be easily grown from seed?

The shrubby or bedding *Calceolarias* are almost as easily raised from seed as the herbaceous kinds. To get early bloom the seed should be sown in February or the early part of March, in a gentle heat, and in fine, rich soil. Prick off the seedlings directly they can be handled, and in due course pot them singly. Grow on under glass until May, when they should be fit for planting out.

Striking Cuttings in a Frame.

How and when should I take cuttings of *Calceolarias*, to be put in a cold frame?

The latter part of October, or even early in November, if the weather remains mild, is time enough for these—if inserted too soon, they become too large by the spring. Take off the sideshoots or strong tops, to a length of three or four inches, trim off the lower leaves, and insert firmly in a bed of sandy loam, placing the cuttings about four inches apart, with a rather greater distance between the rows. The frame should be kept rather close until the cuttings become callused and begin to grow.

Watering Calceolarias.

Calceolarias in a greenhouse are very late. Do they require much water? *Calceolarias* must be kept evenly moist, but not wet, at the roots.

Wintering Cuttings.

Could cuttings of *Calceolarias* (bedding kinds), taken at the end of September, be wintered with success in a cold house?

Yes; these will be quite safe in an unheated house.

CAMELLIAS.

Camellia as a Window Plant.

Will a double *Camellia* (*Mathotiana alba*) succeed if grown in a window facing south-west?

Certainly, though a light shade from hot sun in the summer would be advisable. This variety is of vigorous growth, and should do well.

Camellias from Cuttings.

Can *Camellias* be propagated from cuttings? If so, how is this done?

Cuttings may be struck in pots of very sandy peat, keeping them cool at first, and then plunging in a slight bottom-heat. Insert them in the autumn.

Camellias from Seed.

Can I grow a *Camellia* from seed in a cold house?

Although *Camellias* may be grown with perfect success in a cold or unheated house, yet it is rather a different thing to raise the plants from seed under the same conditions. In the absence of a hotbed or propagator, the best plan is to sow in April or May, when the seed will germinate without artificial heat. Sow in very sandy peat, and keep the soil regularly moist. Soak the seeds in tepid water for a few hours previously.

Camellias in Winter.

Must *Camellias* be moved indoors for the winter? I cannot find space in my conservatory. Would a stable do?

So long as the weather remains fairly mild and open, the plants will be safe in a sheltered position in the open air. They are presumably growing in large pots or tubs. Should severe frost occur, however, they had better

be removed to the conservatory, or to the shed mentioned, though in this case the want of light will affect the plants injuriously, if subjected to it too long. It should be understood that plants in pots, tubs, or boxes, exist under very different conditions to those planted out in a bed of soil, indoors or out, being much more easily affected by changes of temperature.

Grafting Camellias.

What kind of stock is required for grafting Camellias, and when is the best time for the operation?

Camellias are usually grafted on seedling or strong-growing stocks of a single variety. The work must be done in a warm, close house, in the spring, and requires some amount of experience and skill. The plants may be budded, in much the same manner as Roses, in May or June, but here again knowledge and experience are essential.

Scale on Camellia.

My red Camellia seems covered with a sort of scale, and all the buds are dropping off. A short time ago I washed the plant with quassia and paraffin, and since then it seems to have gone back. What should I do for it?

The scale (coccus) must be cleaned off with a hard brush or blunt scraper, and the affected parts be then well washed with a solution of paraffin in water (hot), with a little soft soap. It will also need very careful treatment as regards watering, etc., to bring it round again. Perhaps the quassia and paraffin wash was too strong. Strong insecticides should be washed off with clean water shortly after application.

Unhealthy Plant.

I keep a young Camellia in the cool end of a greenhouse, water when the mould looks dry, and yet even the little leaves at the top have turned brown and dried up.

The plant is in a very unhealthy condition. The soil must be waterlogged or sour, or something of the kind. Carefully shake out and repot the plant in good, sandy peat, keeping it moderately close and shaded, with a moist atmosphere, until growing freely again. If the roots are in a very bad state cut away all the decayed portions, and wash the whole well in tepid water.

When to Repot.

When is the best time to repot an old Camellia?

This plant may be repotted in early autumn, but it is better left until the spring, after it has finished flowering.

CAMPANULAS.

Campanula isophylla alba.

The leaves of this plant seem to get dead at the edges, and gradually die away, though the plants are flowering very well. They are in cork pockets, in a compost of Jadoo and a little mould, and are in a sunny window. Is the decay of the leaves natural, or due to a cultural defect?

These plants always begin to lose some of their lower leaves about the time of commencing to bloom, and this takes place to a greater extent if they are either under or over-watered, or not perfectly happy from some cause. In this case the fault probably lies in the soil—Jadoo fibre, though excellent for many purposes, is too light and loose for the fine, hair-like roots of this plant, which should be firmly potted in sandy loam and leaf-soil, with free drainage.

Campanula pyramidalis in Pots.

I have some strong, spring-sown seedlings of *Campanula pyramidalis*, which I should like to try in pots. In what size should they be planted?

These should be potted in 5-in. or 6-in. sizes. If large plants are required, they may be moved next spring into pots three or four inches larger. They may be flowered in any size from the 6-in. upwards.

Campanula pyramidalis not Flowering.

Seeds of *Campanula pyramidalis* were sown in the spring of the year before last. Some plants were put into the open, others into pots; but neither has flowered. What is the reason?

Although reputedly biennials, *Campanula pyramidalis*, or Chimney Campanulas, do not invariably bloom the first season after being raised from seed, although, as the seed was sown in the spring, they should in the ordinary course of things have done so. We have found that such plants—especially when put out in the open ground—blossomed magnificently the second summer. Those in pots should have plenty of root-room.

Planting-out Campanula pyramidalis.

Last autumn I potted in 7-in. pots six seedling *Campanula pyramidalis*, and put them in a cold (unheated) greenhouse, where they are now (May). They are sending up spikes—one about two feet high, and others shorter. Should I plant them out of doors, out of the pots, or place them out of doors in the pots, or keep them where they are, and, if either of the latter two, should they be repotted into larger pots?

You can plant these out, if you like, though they will flower quite well in the pots, with a little "feeding." It would be useless to repot them now.

Repotting Campanulas.

When should climbing Campanulas be repotted? They were recently cut-back after flowering.

These plants should be repotted in the early spring, not now (November).

Striking Cuttings.

I wish to pot up a few of the sideshoots from a *Campanula* (the common hanging variety, grown in pots). When is the best time to do this?

Presuming that you wish to strike the shoots as cuttings, September, or in the early spring, is a good time. Use sandy soil, and free drainage.

Wintering Campanula isophylla.

I have a number of pots of hanging white *Campanula*. Shall I winter them in a cold frame?

This plant is really hardy, and may be safely wintered in the cold frame, though a sunny window in the house would be better, as being less damp. The old, long shoots should be cut away in autumn, and any young growths may be inserted as cuttings.

CANNAS.**Cannas Blooming in Winter.**

Is it possible to lift and pot Cannas for winter use?

These plants may be taken up and potted, but they will not bloom to any extent during the winter, except in something like the temperature of a stove.

Cannas from Seed.

What is the best means of raising Cannas from seed?

The seeds of these plants, being exceedingly hard, should be soaked in water at about one hundred and twenty degrees, for a day, or be just nicked

on one side with a file. Sow in a mixture of loam, peat, and sand—or any light, rich, sandy soil will do—burying the seeds about half an inch deep. We usually sow in boxes, which should be placed on a brisk hotbed, or in a warm house. Pot the plants off singly when about three inches high.

Cannas not Flowering.

Some Cannas planted out in August have now been taken up. Each has a large crown, or tuberous root, some with shoots. They did not bloom at all. Is that likely to be detrimental to planting them out next spring?

Their having failed to bloom is no harm. Keep the roots as warm as possible for the winter—neither really moist, nor too dry. Some of the offsets may be separated and potted in the spring, if desired, and the old roots had better be potted into suitable sizes before being planted out.

Cannas Outdoors.

Is it possible to grow Cannas outdoors on an open, sunny border?

Cannas are easily grown on almost any fairly light soil; but it must be deeply worked and well manured before planting. They like a warm and sunny position, with a little shelter from rough winds, and must have plenty of water in dry weather.

Pot Culture.

Please tell me how to grow Cannas in pots?

Lay the roots out on moist Cocanut fibre, or moss, in a warm house, on receipt, and if they break into growth from more than one eye each, divide them. Pot the pieces in as small sizes as they will go into, using a light mixture of loam, leaf-mould and sand, with free drainage. Keep warm, but barely moist at the root until well in growth, then water freely. In due course move them into 5-in., and subsequently into 7-in. or 8-in. pots, in which they will bloom, using good, loamy soil, made fairly firm. Give water and liquid manure freely when coming into bloom.

Striking Cuttings.

Can I take cuttings from Cannas? Which pieces are most suitable?

It is not easy to take "cuttings" of these plants, as they seldom produce any suitable growths. The best plan is to take off the suckers or sideshoots from the base, cutting them as low down as possible, and, if possible, getting a few roots to each; but to do this properly necessitates turning the plants out, and shaking most of the soil away. Pot the suckers in small sizes, using light, sandy soil, and plunge them in a hotbed, or keep them close in a warm house until established and growing.

Unsatisfactory Roots.

I have taken up some Cannas which have not flowered this season, though making plenty of leaf. The root part looks like an Onion stem, without the Onion. Are these any good if dried?

These plants ought to have made some rhizomatous tubers underground, and it is strange that they did not flower. Do not dry the roots too much, but keep them in a fairly warm place, and they may start into growth again in the spring.

When to Plant.

When is the best time to plant Cannas out of doors?

If the plants are strong and well-hardened, they may be put out towards the end of May; otherwise, it is better to wait till June.

Wintering Cannas.

Will Cannas survive the winter out of doors? I have a cold frame, but no heat.

Cannas are not hardy, and if once fairly frozen, the roots are killed. A cold frame is useless. These plants seem to succeed best when the roots are wintered in a fairly high temperature.

CANTERBURY BELLS.**Canterbury Bells Failing.**

I have an exceptionally fine lot of Canterbury Bells, raised from seed in the border last year. They have made huge clumps of leaves, but no stems or flowers. Can you account for this?

This will happen occasionally. Either the seed was not sown quite soon enough, or the plants received a check in some way. They will bloom next year.

Plants Drooping.

I have some fine, healthy Canterbury Bells fully in bud, and just showing colour. Three of them suddenly drooped from the top, and, on examination, I found the base of the stem brown, mildewy, and hollow, and easily broken in half. Can anything be done?

There is probably something at the root of these plants. The grubs of the crane-fly (*Tipula*) often attack plants in this way, and should be looked for and destroyed. Use a little lime round the base of the plants.

Pot Culture.

I have a supply of Canterbury Bells about two months old. When shall I pot them for use in a cool greenhouse?

As these plants are only small, they had better be potted into 3-in. or 4-in. sizes, transferring them into 7-in. to 9-in. pots in the autumn, or as soon as sufficiently strong. They will flower in these sizes next season, but must have plenty of water and liquid manure when the flower-spikes are rising, in the spring. They will have to be wintered under glass, but in a cool and airy house or pit.

Seedlings or Offsets?

I have had a fine show of Canterbury Bells, and am thinking of putting in another lot of transplanted seedlings. However, at the base of some of the old plants, there is a strong growth (as in perennials), which seems to separate very easily from the old parent plant. Will this bear flowers next year, or will it remain "blind"?

If the seedlings are sufficiently strong, they would do better than planting the offsets from the old plants. It is probable that these are seedlings which came up. If planted on the same ground, some manure should be dug in when preparing the soil.

Transplanting Seedlings.

I sowed seed of Canterbury Bells in boxes, afterwards transplanting them into a bed. Would it be correct to move them into their flowering quarters in September? Will they need protection?

If the plants are fairly large and strong, they may be put out safely during September, as mentioned. They need no protection, as they are perfectly hardy where the soil is fairly light and well drained.

Treatment after Flowering.

Ought Canterbury Bells to be rooted up after flowering, or simply cut down? Do the same plants flower next year?

These plants seldom do much good the second season—better destroy them and employ young plants.

When to Sow.

If I sowed some seed of Canterbury Bells in the autumn, would they bloom the following summer?

No; these plants are true biennials, and the seed should have been sown in April, or not later than June, to obtain plants that will flower next year.

CARNATIONS.

Culture.

A Question of Floriferousness.

Which blooms most freely, the Tree Carnation or the Border variety?

The former keep up a more continuous supply of bloom, but they do not have so many flowers open at one time.

Best Age for Malmaisons.

At what age are Malmaisons at their best, and when should the old plants be discarded?

These are usually at their best in the first or second season, but a healthy plant will often pull through, and make a grand specimen in the third or fourth year. Many growers discard the old ones as soon as they have been propagated from, but there is no age limit—it depends on the state of the plants.

Calyx Bursting.

I find that nearly all my Carnations hurt the calyx. I know the fault is inherent in some varieties, but I have a fair assortment, including some which should give perfect flowers. The soil is rich, and the plants make luxuriant growth. What is the remedy for this defect?

This fault is due, to a great extent, to the conditions under which the plants are grown. A very rich soil (especially if loose also) has a strong tendency to cause bursting of the calyx. A moist and comparatively cool season, which promotes a very vigorous growth, is usually accompanied by a good deal of pod-bursting also. Grow the plants in the sunniest positions available, use very little manure (but plenty of burnt soil and old mortar or lime-rubbish), and tread the soil in the beds almost as hard as the paths.

Carnations on a South Border.

I have some of these plants in pots. Will they succeed if planted out on a border facing south?

Yes; they should do well. They had better be planted out at once (March), in a bed of good but not too rich soil, made quite firm about the roots. Their chief needs are plenty of fresh air and sun, a firm root-run, and careful watering.

Cats and Carnations.

I had some splendid Marguerite Carnations, but the cats have laid them low. The foliage and stems lie withered, and in a very poor condition, though the plants are alive and shooting here and there. Should I cut them all down to the ground?

You had better cut away all the old stems, and give the bed a light top-dressing of rich soil.

Compost for Potting.

What is the best mixture to use for potting young Carnations (indoor specimens)?

A good compost for Carnations in pots consists of about two parts of loam, one part of leaf-soil, half a part each of old hotbed manure and old mortar or lime-rubbish, crushed rather small, some sand, and a sprinkling of soot and bonemeal.

Continuous Blooming of Tree Carnations.

The usual instructions for this variety treat it as a winter-flowering subject. If it is, as it is described, a "perpetual-flowering" Carnation, please inform me how to secure blooms all the year round?

Many of the Tree or Winter-flowering Carnations are, to a certain extent, "perpetual," or nearly so—that is to say that they may be had in bloom during the greater part of the year, if not quite all round. But, to do this, three or four separate batches of plants must be grown, under varying conditions, for they cannot be expected to continue to grow and flower indefinitely. During the summer, most of them, if properly prepared and planted, will bloom in the open ground for a long time; these should be succeeded by a small batch of late plants, in pots, to fill up the gap until the main batch of winter-bloomers commences to expand, and then another lot will be necessary to keep up the supply during the spring—from March till the end of June.

Cutting Leaves before Planting Out.

Is it beneficial to cut all the outside leaves short with a pair of scissors, leaving the growing point, just before planting out?

To cut the leaves cannot fail to prove injurious. Some few plants require a little defoliation at times, but not the Carnation. The leaves are the lungs of a plant, and their removal is certain to weaken it.

Difference between Varieties.

What is the difference between Border, Tree, and Malmaison Carnations? The Border Carnations are those usually seen in gardens, of a dwarf habit of growth, and flowering only in the summer. The Trees are of a more tree-like habit of growth, and in a suitable temperature flower in the winter, while the Malmaisons are very sturdy in growth, with large flowers and broad foliage.

Early Blooming.

Will American Tree Carnations flower in a cold house in the spring, before the Border varieties or Malmaisons?

Yes, to a certain extent, but they really need a little heat.

Forcing Malmaisons.

Can this variety be treated like American Tree Carnations, and forced into bloom about Christmas?

No; they will not stand the same treatment. They may be very gently forced as the days lengthen, but their proper time for flowering is the spring or early summer.

Marguerite Carnations.

Seeds of Marguerite Carnations were sown in May in the open border. Will they live through the winter, and bloom next year?

The seed of these plants was sown too late—it should have been done in March, in a gentle warmth. If the winter is not very severe, the plants will live and bloom next season.

Old Plants Depreciating.

Is it worth while retaining the same plants year after year—do they depreciate if so kept?

If these plants are left alone year after year, they will become straggling,

and die off; the young shoots must be layered every summer, and the layers planted out afresh in the autumn. If properly layered and attended to, they do not depreciate to any extent, at least not for a good many years.

Pinching Malmaisons.

Should Malmaisons be pinched?

No; these plants should be allowed to grow naturally.

Size of Blooms.

Have Tree Carnations larger blooms than the ordinary variety?

American Tree Carnations have large blooms, also some English sorts; but in the ordinary Border sorts we now have some fine varieties, nearly as large as the best Malmaisons.

Size of Pots for Malmaisons.

What sized pots should be used for Malmaisons for the first, second, and third years of growth?

These may be in 5½-in. or 6-in. pots for the first year, 6-in. to 7-in. the second (according to strength), and 7½-in. to 9-in. the third year. These plants must not be over-potted.

Stimulants for Malmaisons.

Give the names of a few good artificial fertilisers for Carnations, and say when to apply?

Soot water is good, if given very weak and clear; also guano water now and then. Sulphate of ammonia and nitrate of soda are also valuable; either may be used occasionally, in the proportion of half an ounce to the gallon of water. For a corrective, sulphate of iron is chiefly used.

Stopping Tree Carnations.

I want to plant some Tree Carnations in the garden, to bloom there in May. When ought I to stop them, to have them bushy, or will stopping prevent them blooming in summer?

The plants may be stopped, if necessary, in the early spring, or when they begin to push up; but some of the new varieties do not require to be stopped, as they branch out naturally from the base. It is doubtful if you will succeed in getting Carnations to bloom in the open air before June, at the earliest.

Syringing Indoor Malmaisons.

Should Malmaisons grown indoors be syringed overhead?

No; little, if any, syringing is necessary, as a fairly dry atmosphere is essential.

Treatment of Malmaisons.

To grow Malmaisons, is it correct to put them outdoors in the summer, and bring them in to flower, keeping them under glass until the following summer?

The plants may certainly be placed in the open air after flowering, but as they bloom in May and June they cannot well be exposed before that. As a rule, they succeed best under glass nearly, if not quite, all the year round. They are usually plunged, or planted out, in a cool pit or frame after flowering, to be layered, but this may be done in the open air if necessary.

Tree Carnations in a Living Room.

Some Tree Carnations were planted out in the garden to rest from August to October. They are now (November) in pots in a living-room, where there is fire all day and a lamp at night. Do they require to be trimmed up and watered?

These plants do not need to "rest" during the early autumn—they should be growing on steadily towards the flowering point. Carnations do not require much "trimming up," as a rule, and anything of the nature of pruning or stopping depends altogether upon the condition of the plants. Water them as often as the soil becomes slightly dry, and then give a good soaking. They ought to be showing for bloom now. With care, they ought to do very well in a warm room.

Wintering Tree Carnations in the Open.

Will this type stand the winter in the open ground?

We have seen them stand satisfactorily through the winter. They require very little heat. Sun and air, with sufficient warmth to guard against frost, will produce the best results.

Winter Treatment of Box Plants.

Should Carnations and Pinks, growing in boxes in the open, be taken in for the winter?

It is not actually necessary, as both are quite hardy, but it would be better to put them in a cold frame, or something of the kind, on the approach of severe weather.

Uncovering Seedlings.

When Carnation seedlings appear, should the glass covering the pots be immediately or gradually removed?

Remove the glass gradually, not all at once, tilting it up a little on one side (with a bit of wood, or a piece of crock), for an hour or two, morning and evening, at first; then all day, and finally take it off altogether.

Layering and Planting.

Autumn-struck Carnations.

When may Carnations, autumn-struck, be planted out in their permanent quarters?

This may be done in the spring, March or April, if strong enough.

Best Time to Plant.

When should Carnations be planted, to produce good flowers the following summer?

October is the best month for planting.

Covering Layers.

A quantity of Carnation layers, in pots, in a cold frame, are covered over with Cocoanut fibre, to the depth of two inches. Will this be too moist for them?

Unless you wish to lose your plants, you must take this off at once. There is no need for covering them thus in winter.

Cuttings or Layers?

I have a fine old Crimson Clove. Would it be better to take layers or cuttings?

Layering is the best method of propagating these plants. Cuttings of the smaller or badly-placed shoots may be taken, but the others make the better plants. The layers may be put down as soon as the blooming is finished, or at any time in July and early August. A suitable compost may be prepared of equal parts of loam and road grit, with half a part of leaf-mould, and a little burnt-earth or wood-ashes, if available.

How to Separate Layers.

Which is the best way to detach layered Carnations from the parent plant?

This should be done with a sharp knife. It is better to do it a week or so before transplanting them.

Ineffective Layering.

My Carnations were not layered properly, as they were not cut through the knot. They appear to be still alive. Would they grow if I took each shoot off, and put them in small pots in a cold greenhouse?

These would probably form roots and make plants if treated as you suggest. Take care to bury the cut part in the soil, which should be of a sandy nature. It would be advisable to keep them rather close, and shaded from bright sun, until roots have been formed.

Late Layered Carnations.

My layers have not yet made much root, as they were not done till late, as the "grass" was so small. Would it be a good plan to lift them at the end of September, and plant in a cold frame, like cuttings, or is it necessary to pot them?

If the layers are not sufficiently rooted (which can be ascertained by taking up two or three), they had better be left until the spring, and be separated and planted out then. There is no necessity to remove them to a frame.

Planting Firmly.

Is it true that Carnations are more liable to disease when not firmly planted?

Yes, this is quite true. Always plant Carnations very firmly, keeping the neck or collar of each fairly high, and in very wet weather put a little fresh coal-ashes, charcoal, or lime-rubble round each, close to the stems.

Preparing Cuttings.

What is the best way to prepare Carnation cuttings? Should they be cut slantways, or straight across?

Cut them clean across, immediately below a joint, and pull off the two lowest leaves with a sharp jerk. Some growers pull them out, but this plan cannot be recommended, as unless it is done just right the stem is apt to snap off above the joint. Cut off the tips of the leaves, and the cuttings are ready for insertion.

Propagating Marguerite Carnations.

My Marguerite Carnations are in full bloom, with good sideshoots. Can I take cuttings to bloom next season?

These may be so readily raised from seed that it is not worth the trouble of propagating from cuttings. Seed sown in summer, or even in January, will flower next season.

Propagating Tree Perpetuale.

A number of these are in full bloom, and have many young sideshoots of fair length. Can these be taken off and planted separately, to bloom next season?

The Tree varieties should be propagated from cuttings. They require a close frame. A little bottom heat is also beneficial; but in hot weather they may succeed without it. They should be kept close and shaded.

Rooting American Tree Varieties.

A number of American Tree Carnations, in pots, should have bloomed at Christmas, but, having no heat, came in bud, and then went back. If I take off the sideshoots in summer and plant in the open ground, will they bloom like ordinary Carnations next season?

These require the same treatment as the Tree varieties, but are more vigorous. Very few of the Carnations will root in the open ground. The American varieties flower very well in the open.

Shifting Malmaisons.

Some Malmaison Carnations, about a foot high, in 5½-in. pots, were struck last autumn, and have been grown in an unheated greenhouse. Shall I plant them out, or repot them?

Do neither, but leave them in the pots they now occupy. With a little feeding when the huds begin to show, they will flower well later.

Suitable Soil for Carnations.

Would ordinary garden mould produce fair results?

Yes, if sweet and not too light; mix some old mortar-rubbish or spent lime, and a little burnt material of some kind with the soil before planting.

Time to Sow.

Is the end of August too late to sow seed of Border Carnations in a cold greenhouse?

No; if sown then they should make plants to flower the next season.

Treatment of Rooted Layers.

What should be done with layered Carnations that have rooted well—leave them in the ground, or pot them and keep in cold frame?

If the soil is not too heavy or damp, and the position not much exposed, plant the layers out as soon as possible; otherwise they should be potted singly in 3-in. or 3½-in. sizes, wintered in the frame, and planted out in spring.

When to Separate Layers.

How long should Carnations, layered into pots sunk in the bed, remain before being separated from the parent plants?

These may be separated as soon as they have formed plenty of roots, which is usually in five or six weeks from time of layering.

Wintering in a Cold Greenhouse.

Will young Carnations in pots go through the winter safely in a cold greenhouse?

Carnations are quite hardy, and will succeed in the greenhouse or in a frame. To prevent frost splitting the pots, keep on the dry side in severe weather.

Diseases, Pests, &c.**Blight on Indoor Carnations.**

What is a good wash to keep down blight, etc., and to maintain the plants in a healthy state?

Insects should be destroyed by vapourising, if possible; but if a liquid must be employed, then syringe with a solution of quassia and soft soap.

Buds Shrivelling.

Why do Carnation flower-buds sometimes shrivel up and wither before coming out, although in good soil and well watered?

The surface may be moist, but the ground may be dry underneath, or there may be some other trouble at the roots. We have found the chief cause to be getting a little too dry early in the bud state.

Cause of Failure.

The bud of a Tree Carnation died off just after opening. What is the cause and remedy?

The plant is out of health. You had better water it a few times with fairly strong lime-water, but keep the soil on the dry side on the whole.

Green Centre in Malmaison Blooms.

What is the cause of a ball of green in the centre of Malmaison blooms, in pots in a greenhouse?

It is quite characteristic of Malmaison Carnations to have this green bud, and to attempt to remove it would spoil the bloom. If the plants are healthy, these green centres should produce another set of petals, and fill up the centre of the blooms. Actually, the ovary produces petals instead of seeds.

"Spot" Disease.

Can you tell me the cause and cure for "spot," which attacked a bed of Carnations in November?

This disease was probably caused by the mild, damp weather, fogs, etc. Under glass it is caused by a too close, moist, and stuffy atmosphere, and want of ventilation. Dust the plants freely with a mixture of fresh lime (in fine powder) and sulphur in equal parts, and a good sprinkling of lime round the plants will also benefit them considerably. The worst of the affected leaves had better be cut off and burnt.

Stems Decaying.

A large proportion of my Carnations have been lost this season through the stems rotting or decaying about the time of flowering. Is there any remedy for this?

The rotting, or decay of the stems, is probably identical with a disease known as "Gout," which is caused by the presence of minute nematoid worms called *Tylenchus*. These eat their way up through the stems to the leaves, leaving diseased tissues wherever they go, and causing the stems to become swelled, or knotted, and split, and then decay sets in. In bad cases the best "remedy" is to pull or dig up all the affected plants and burn them, planting a fresh lot in virgin soil, or in some other part of the garden. Failing this, give the ground a good dressing of either quicklime or gaslime, and two or three months subsequently (not earlier) plant again, using little or no manure.

Wireworms.

My choice Carnations are drooping as they come into flower. Upon examining some of the roots, I found them infested with small, active, whitish worms, that have been eating up the insides of the plants. The soil is turfy loam, and was formerly a meadow. There is a heap of old lime, and I have spread some of it round the plants, hoping, with the aid of watering, to drive the worms away from the roots. Would this do any good?

This is undoubtedly the work of wireworms, which are frequently very abundant in the soil of old meadows, such as you describe. The spent lime mentioned may have a slightly beneficial effect—at any rate, it will benefit the plants—but this will not destroy, or even check, the insects to any extent. The only real remedy is gaslime. To apply this the ground should be cleared in the autumn, putting on the gaslime at the rate of six or eight loads per acre. After lying on the surface for two or three weeks dig it in. In the meantime, the wireworms had better be trapped, as far as possible, by burying pieces of Potato and Carrot among the plants (each marked with a bit of stick), or by planting seedling Lettuces about the beds, examining the roots of all that wither away.

CELOSIAS.**Celosia Seed not Germinating.**

For two years running I have sown seed of Celosias, but cannot get it to come up, although other seeds germinate freely. Is any special treatment required?

The Celosia requires a good hotbed, or warm house, in order to come up with any degree of certainty.

Celosias Sown in Autumn.

I have just pricked off seedlings of *Celosia*. At present they are grown in heat, but I have not sufficient space to keep them in the same house all the winter. What is the minimum temperature to successfully winter them?

The *Celosia* is a tender annual, and requires the heat of a stove, or intermediate house at the least, to keep the plants growing on through the winter. We have never tried the experiment of sowing in the autumn, but the plants will certainly only survive in a moderately high temperature (sixty degrees or so); if successful, they should make grand specimens in the spring.

Greenhouse Culture.

What treatment should be adopted with *Celosia pyramidalis* for late-flowering in a greenhouse?

They should be potted on as fast as they require it, until 5-in. or 6-in. pots are reached, in which they will bloom. Use a compost of two parts of loam to one part each of leaf-mould and decayed manure, a good dash of sand, and a little bonemeal, or of any good artificial. Keep them moderately and evenly warm, with moderate ventilation and a light shade from hot sun, and give plenty of water. The foliage should be syringed occasionally, as it is rather subject to red-spider.

Outdoor Treatment.

Can *Celosia pyramidalis* be flowered in a sunny position outside, in well-manured soil?

Yes; these plants may be successfully grown in the open air during the summer, but they require a mellow, well-manured soil, and plenty of moisture in hot weather, as well as a somewhat sheltered and warm position. Do not put them out until the weather is fairly warm and settled. They bloom during the latter part of the summer, and vary in height from one to two feet, according to circumstances.

When to Sow.

When is the proper time to sow seed of *Celosias* for bedding out? I want a good dwarf strain. Can it be obtained, or is it in the method of growing them?

The seed of these plants should be sown early in spring, as they are somewhat slow in growth. Sow in a good hotbed, or in a house heated to sixty to seventy degrees. There are two distinct strains, the tall and the dwarf, of which the latter is much the better.

CHRISTMAS ROSES.**Christmas Roses in a Frame.**

Will Christmas Roses do best in the open, or in a cold frame?

These plants do quite well in the open air, but they may be grown in a frame, taking the light right off in the summer. When once planted, they must not be disturbed.

Christmas Roses not Flowering.

Two years ago I planted a Christmas Rose in a warm border, but it has not grown, nor bloomed. What treatment does it require?

This plant is in the wrong place—it likes a cool, shady, and rather moist position, and a rich, loamy soil. It had better be transplanted to more favourable quarters.

Christmas Roses on a Clay Soil.

Could I grow Christmas Roses in a soil of a clayey nature?

These charming plants (*Helleborus niger* and vars.) may be grown with

great success in a clayey soil, but it must be well worked and trenched, to a depth of two feet or more, and some well-decayed manure, or leaf-soil, road-scrappings, etc., be worked in, to enrich and lighten the staple.

Flowering in Pots.

What is the best treatment for Christmas Roses, in pots, to procure good show of blooms at the end of December or beginning of January?

These charming plants do not succeed to any extent in pots—that is, when grown permanently or continuously in them. They thrive much better when planted out for the summer, and lifted and potted, to bloom in the late autumn. The only other way is to grow them in large, shallow pots, or tubs (three to five plants in each), with good soil and drainage, and keep them in a cool, lightly-shaded spot for the summer, with water as required, removing them under glass in November, to bloom. In any case, plenty of moisture and a cool temperature are essential.

When to Plant Christmas Roses.

When is the best time to plant Christmas Roses?

April is probably the best month for planting, but it may be done, with care, during the autumn or early winter.

CHRYSANTHEMUMS.

Culture.

Chrysanthemums Breaking Naturally.

What would be the effect of leaving all kinds of Chrysanthemums to break naturally? Would it only retard the blooms—supposing that when they did break the right bud was taken?

When Chrysanthemums of the Show varieties are allowed to break naturally, the only difference—provided that the proper buds are taken subsequently—is that they flower at various times during October, November, and December, instead of coming in all at once. The chief object in “stopping” is to get the blossoms in perfection by the time when the November shows are usually held; beyond this it is practically superfluous.

Chrysanthemum “Sports.”

What is a Chrysanthemum “sport”? Is there any special cause for its production?

A Chrysanthemum is said to “sport” when a plant produces, on one or more branches, flowers of a colour different from that natural to the variety. Cuttings taken from such branches, or from that part of the plant, usually produce blossoms of the same colour, and, if the plants continue to do so for two or three years, the sport is said to be “fixed.” There is no law in the matter; such sports occur quite spontaneously, now and then, and frequently in two or three places at the same time. It is said that plants that have been neglected and starved are the most likely to produce sports.

Cutting-down after Flowering.

Is it necessary to cut down Chrysanthemums close to the ground when they have finished flowering?

It is advisable, for appearance sake, to cut down plants of this class when they begin to go off in the autumn.

Dwarfing Japanese Chrysanthemums.

My greenhouse has a low roof. Can I grow Japanese Chrysanthemums in 8-in. pots, to bear two blooms on each, early in November?

You may grow almost any of the large Japanese varieties with two blooms

apiece in 8-in. pots, but why not use the 8½-in. or 9-in. size, and retain three blooms?—the plants look very much better. To keep them dwarf, stop the plants late, and take the first buds that appear after the beginning of August.

Explanation of Terms.

What is meant by "stopping" and "taking the buds" of Chrysanthemums? "Stopping" means pinching out the point of the leading shoot of a plant. This may be done either while the plant is small, to induce a bushy growth, or at various stages, later on, to cause the plants to develop their buds at the right time. "Taking" or "retaining" the buds means pinching out the young side-growths that appear just below a crown bud, in order to cause this to swell up and develop.

Forming Bushes.

Can all Chrysanthemums be stopped to form bushes?

Yes; but frequent stopping reduces the size of the blossoms.

Grafting Chrysanthemums.

Is it possible to obtain new varieties, or is any other advantage to be gained, by grafting Chrysanthemums?

It is not usual to graft Chrysanthemums, and little is to be gained by it, except by grafting a delicate variety on a strong grower. New varieties are obtained from seed, not by grafting.

"One-Bloom" System.

I wish to grow Chrysanthemums, which I intend flowering in 6-in. pots, one bloom to each plant. Will you let me know when to stop, and which bud to secure?

As a general rule, plants grown on this system should not be stopped, certainly if the blooms are not required to be at their best by a certain date. Grow them right on from cuttings, keeping them moving all the time, and take the first buds that appear after about the first week in August.

Pinching Early Chrysanthemums.

I want sturdy bushes and a good display of bloom. Should the plants be pinched when received from the nurseries?

To induce a bushy habit of growth they must certainly be stopped once or twice while small.

Premature Blooming.

Early this month (May) I planted out a number of rooted cuttings of Chrysanthemums. They are now about six or eight inches high, and are showing flower buds. Is this as it should be, or ought the buds to be removed?

It is rather extraordinary for flower buds to be produced so early, and it looks as if stem cuttings had been employed. The buds must be pinched out, and the plants encouraged to grow.

Reducing Height.

This year my Chrysanthemums in pots have grown as high as four feet, and those in the ground over five feet. How can I make small, bushy plants of about two or three feet in height?

Pinch the points out of the cuttings as soon as they begin to grow, and repeat the process, if necessary, beyond the third or fourth leaf. Some varieties are naturally tall growers, and you may not get them less than three feet in height.

Retarding Blooms.

My early-flowering Chrysanthemums have been very forward, and bloomed before I had need for them, as I wanted them for cutting when other flowers are getting scarce. I am told I can retard them by pinching them two or three times, but not later than the first week in July. The disadvantage of this course appears to be to increase the number of blooms at the expense of their size. Is there any way by which I can retard them?

The flowering may be delayed somewhat by pinching the shoots, as suggested; but, if the buds are too numerous, they can easily be thinned out. If you stop much later than the time named, there will probably be no blooms at all.

"Starving" the Plants.

This year my named Chrysanthemums have shown a tendency to revert to a semi-double form, the blooms showing an eye about three-eighths of an inch in diameter. The soil was heavy; but I gave no manure whatever. They were propagated by offsets. Will they recover their double form next season if they are given more liberal treatment?

There can be very little doubt that the cause of the fault mentioned is that the plants have been partially starved. Take up, divide, and replant them next April, in ground that has been well trenched and manured, and the flowers are almost certain to regain the fully double form.

Stopping Specimen Chrysanthemums.

I pinched some specimen plants of decorative Chrysanthemums once in April. Will they want pinching any more?

This depends upon how many shoots each of the plants have. If there are already sufficient—six or seven to nine apiece, except for specimens—do not pinch them any more; but otherwise they must be stopped again.

"Stopping" Twice.

If a Chrysanthemum is stopped twice, will the first bud be a second-crown, the same as if the plant had two natural breaks?

No; when a plant is stopped more than once, you lose count of the buds, and must take what you can get.

Syringing Indoor Chrysanthemums.

Is it necessary or advisable to spray and water Chrysanthemums in a cool greenhouse, in the spring?

Cuttings may be slightly dewed overhead on fine mornings; but established plants require no syringing indoors. They should be outside by May.

"Taking the Buds."

How shall I "take the buds" off Chrysanthemums that appear after August?

"Taking the buds" is done by pinching out the young lateral growths that are always found just below them; it is the flower (crown) buds that are meant.

Temperature for Chrysanthemums.

My greenhouse is kept to a temperature of about fifty-five degrees. Is that too great for Chrysanthemums when in flower? I am told they go off quickly in too great heat.

The flowers of Chrysanthemums naturally fade more quickly in a high temperature, but that named will not hurt them, although a little less would be better.

Thinning Clumps.

Outdoor Chrysanthemums did well last season. The clumps are now (May) about a foot across, and each has a number of shoots showing. As

it is not convenient to divide them up, should I pull out some of the shoots? The shoots of these plants had better be thinned out, leaving only from five to seven of the best.

Treatment of Incurved Varieties.

I have grown an Incurved Chrysanthemum in the open ground; the first three or four blooms were nicely incurved, but those that came afterwards were large, and not incurved at all. Ought I to have grown it in a pot, and stopped it, and taken the buds at stated times?

This is partly the result of the plant being grown in the open air—this section expands best under glass—and partly from too many buds having been left, presumably. If they had been thinned to five or six, they would have opened much better. The plant might have done better in a pot, but would have required constant care in watering and “feeding.” The buds of the Incurved Chrysanthemums should be taken as they appear, towards the end of August, or early in September.

Diseases, Pests, &c.

Blooms Damping-off.

What is the reason Chrysanthemums damp-off at the petals? Some very large blooms commence damping-off when about half expanded.

This is a very common complaint. It is generally caused by excessive moisture in the atmosphere, etc., and insufficient ventilation, but sometimes it will occur in spite of every care. A gentle warmth in the pipes is a great preventive.

“Damping.”

What is the reason Chrysanthemums occasionally turn brown and rot when first showing colour, and the preventive?

This affection is termed damping, and is caused by the condensed moisture settling in the flowers, and causing them to decay, as described. Keep a little warmth in the pipes, especially in wet, foggy, or dull weather, so as to keep the air in motion, and ventilate the house as freely as possible. Once it commences, there is scarcely any means of stopping it.

Eelworms in Pots.

In repotting some Chrysanthemum plants, I came across a number of small, white, thin maggots or worms, the insects smothering the bottom of the pot, in addition to inside. Can you explain the cause of this pest?

The insects are probably a species of eelworm, or *Tylenchus*. We should say that the fault lies in the soil used for the plants, which must be deficient in lime, or from some cause unwholesome. Try the effect of watering with weak lime-water (but made from fresh lime) about twice a week, or else shake the whole of the plants out, and repot in good, fresh soil, to which a good sprinkling of lime has been previously added. Possibly foul water, containing the germs of the insects, has been used at some time.

Leaves Turning Brown.

What causes the leaves of my early Chrysanthemums to dry and turn brown? I have given them nitrate of soda, but not much manure.

It is difficult to account for this without seeing the leaves. Nitrate of soda has the effect of keeping the foliage a healthy green colour, so, unless you gave too much, this could not be accountable. Try a solution of sulphate of iron, half an ounce to the gallon, once or twice.

Maggots on Leaves.

The foliage of my plants has been badly infested with maggots this season. I have been constantly picking them off, and destroying them.

The grubs in the leaves are caused by an insect similar to, if not identical

with, the Celery-fly (*Tephritis onopordinis*), laying its eggs just within the substance of the leaves, during the summer. These soon hatch, and become "maggots," which eat their way in the parenchyma of the leaves, destroying their texture and crippling their functions. The insects should be pinched between the finger and thumb, or picked out with a pin, as soon as seen. The only preventive measure is to syringe the plants with something distasteful to the flies, such as quassia-water or tobacco.

Marguerite-fly.

The leaves of my Chrysanthemums all look as though they were dying. There is a small brown maggot about a quarter of an inch long. Is there anything I can do?

This is the Marguerite-fly. Take off and burn all the affected leaves, and keep the maggots pinched out with the finger and thumb, or picked out with a pin, as fast as they appear.

Remedy for "Rust."

My Chrysanthemums are attacked with "rust." Can you give me a remedy?

Pick off all the affected leaves, and burn them, and syringe the plants with sulphide of potassium.

Remedy for Scale.

What will remove a scale which affects Chrysanthemums under glass?

This must be got rid of by brushing the affected parts with a strong lather of soft soap with a very small quantity of paraffin in it. Two or three days later brush or scrape off all the worst of the dead insects, and give another dressing.

Manures and Fertilisers.

Basic Slag as a Top-dressing.

Is the end of July too late to apply basic slag as a top-dressing for exhibition Chrysanthemums which are intended for show at the beginning of November?

This fertiliser is very slow in action, but as there are three months before the show it might begin to have some effect by that time. The best substitute is superphosphate (of lime), which may be used either as a light top-dressing, or dissolved in water.

Fertilisers for Pot Plants.

What is the best manure for early-flowering Chrysanthemums in pots? The soil is two parts turfy loam, one part each silver sand and leaf-mould.

You may use almost anything for these plants, and the more it is varied the better. An infusion of horse or sheep's droppings, always weak and clear, is perhaps the best. For a change, give a solution of nitrate or sulphate of ammonia, half an ounce to the gallon; soot-water (weak and clear); guano-water, one or two ounces to the gallon, etc. You have too much sand in your soil.

Pigeon Manure as a Fertiliser.

Can pigeon manure be used as a dressing for Chrysanthemum beds?

This is a very powerful material, and it is best to mix it with three or four times the quantity of fine, sandy soil, and a little lime, and let the whole lie together for two or three months. Then dig it in the ground in the ordinary way, or put it on as a top-dressing, pricking it lightly into the surface. Do not use too much.

Soot and Lime for Chrysanthemums.

Is lime or soot a good manure for Chrysanthemums? If so, how often to be applied?

Soot-water is a useful fertiliser, and may be applied once every two or

three weeks, with other things in between. It must be perfectly clear, and very weak, however. Lime should not be used, unless only soft or rain-water is given the plants, when a very small lump—the size of a small Walnut—may be dissolved in each can of water occasionally.

Stimulant for Chrysanthemums.

Will the following mixture be suitable for Chrysanthemums: Half ounce sulphate of ammonia, quarter ounce sulphate of iron, and quarter ounce superphosphate of lime, in one gallon of water, to be given twice a week when in bud?

This is an excellent mixture; it will not injure the young shoots. Keep it off the foliage.

Planting and Potting.

"Bush" Plants in Pots.

Are "forty-eight" pots large enough to grow good, bushy plants in?

Chrysanthemums cannot be grown properly in 5-in. pots ("forty-eights"); if to carry three or four blooms only, they must have pots about nine inches in diameter. "Bush" plants should be grown with five, seven, or more stems apiece.

Dividing Outdoor Chrysanthemums.

Can I divide, with a sharp spade, some fine roots of outdoor Chrysanthemums?

These plants may be divided and replanted, as suggested, but it should be done in the spring; if disturbed now (December) they are liable to die off.

Moving in Autumn.

Can Chrysanthemums that have finished blooming be moved into new quarters?

If plants in the ground are referred to, they had better be left till the spring.

Replanting on Border.

I wish to replant my early-flowering Chrysanthemums. When they have done flowering I propose to take them up, and lay them in well, while I dig over the border and incorporate fresh manure, as I should like to have it done before the spring. Should the roots be covered while they are laid in the ground?

Leave the plants alone until the spring, and then take them up and lay them in, as proposed, while the border is trenched and manured. Then divide them into pieces, with five or six growths apiece, and replant. If the weather is fairly mild, there is no necessity to protect the roots while laid in.

Size of Pots.

What sized pots should Chrysanthemums be finally put in, to flower well?

The size usually employed is from eight to nine inches in diameter, but large specimens must have still larger pots.

Space between Plants.

What distance apart should I plant early Chrysanthemums to make a bold show?

These plants should be placed about two feet apart in the rows, with a space of two and a half or three feet between these.

Time for Final Potting.

When should I pot Japanese Chrysanthemums to come into flower in batches from October until Christmas, and to be over about the first week in February?

You should get the early-flowering plants in their final pots towards the end of May, the mid-season kinds in June, and the late ones in July. Unless you particularly want large blossoms, we should not grow the plants in the "mop-stick" fashion, but more in the bush form, with a dozen or more blooms on a plant.

When to Plant Out.

When should Chrysanthemums be planted in the open border?

From April till June is the right period for planting out. The earlier they are got in place, in reason, the larger will the plants become by the autumn.

Propagating.**Cuttings in a Cold Frame.**

I have just taken some Chrysanthemum cuttings. Should they be put in a greenhouse, or cold frame?

The best place is in a rather deep box, with some damp ashes in the bottom, and a sheet of glass laid over them, but not too closely. When they root and begin to grow, take them out and stand them on a shelf, or somewhere near the glass.

How to Take Cuttings.

Will you say how and when to take cuttings of hardy border Chrysanthemums?

The spring, from February till the early part of April, is the best time to insert cuttings of these plants, doing so in a greenhouse, or in a frame over a very gentle hotbed, if possible. Take them off just below a joint, and, when about three inches long, trim off two or three of the lower leaves, and insert in pots or boxes of light, sandy soil to about half their length, making the soil firm, and watering in well.

Preserving Old Plants for Cuttings.

To obtain new shoots for next year's growth, should outdoor Chrysanthemums be taken up and put into pots?

As a rule, they will be quite safe with a little litter thrown over them on the first indications of hard weather. If they are on a cold, clay soil, however, it is advisable to take up and winter under glass an old plant of each variety. They need not be potted—just lay them in.

Propagating Outdoor Plants.

How can I raise more plants from a few good outdoor Chrysanthemums?

Cuttings of the young shoots will root in boxes or pots of sandy soil in the spring, say, in March, in a cold frame; or the old plants may be divided and replanted in April—not before. The former is the better plan.

Rooted Offsets v. Cuttings.

In lifting outdoor Chrysanthemums, I found some of the young shoots from the mould were rooted, and I potted them. Will they make as good plants as cuttings?

These rooted offsets will make very good plants, but they will not be quite equal to those properly grown from cuttings.

Temperature for Cuttings.

What temperature is necessary for Chrysanthemum cuttings, just taken?

If they are wanted to root fairly quickly, they should have a temperature of not less than forty-five to fifty degrees at night.

CINERARIAS.

Cineraria Leaves Eaten.

The leaves of my Cinerarias, both in a frame and in the greenhouse, are eaten by insects or caterpillars. What can be done to prevent this?

It is probably slugs that are doing the mischief. Look for them at night, with a light, destroying all you can find, and dust some lime or soot about between the pots.

Insects on Cinerarias.

I have great difficulty in keeping my Cinerarias (April sown) clean. Do you recommend syringing or fumigation as preferable?

For this purpose there is nothing to equal vapourising with nicotine—it kills insects of all kinds with absolute certainty, and does not harm the most delicate plant.

Quantity of Water Required.

Do Cinerarias succeed better if kept rather on the dry side?

This treatment will not suit the plants at all. They must be kept fairly moist, but, of course, not absolutely wet.

Saving Seed.

In the greenhouse I have a red Cineraria which has a scent like wild Coltsfoot. Is this abnormal? How can I retain the seed?

We do not remember having seen a Cineraria scented like the Coltsfoot. The plant should be propagated. Let it stand alone until the flowers are over, and the seed has set and the heads become "fluffy." They should then be cut and placed on paper in a shallow box on a dry, sunny shelf, to dry off. When thoroughly matured, shake and rub the seed out, and clean it as well as you can. You had better pass your finger gently over each truss of the plant, when it is in bloom, to distribute the pollen. This is best done about noon, when the sun is shining. If the plant is healthy, a few rooted suckers or offsets from the base might be taken, potting and growing them on in a cool pit or frame.

Treatment after Flowering.

What treatment should be given to Cinerarias when they have finished blooming?

The best thing to do is to throw the old plants away, and raise fresh ones from seed.

CLEMATIS.

Blooms not Expanding.

A Clematis montana against a wall promised well last year, but the bloom all went back, and looked brown. This year it is blooming well, but the upper part lying along the top of the wall is browner, the leaves have a withered look, and the flowers themselves are smaller. What is the reason of this?

This is due to the weather. Cold winds, night frosts, and constant changes of temperature frequently render it impossible for such early-flowering subjects as this to expand properly, except where sheltered in some way.

Clematis and Roses.

Can a Rose be grown on the same fence as a Clematis Jackmanni? If so, what would be the best for the purpose?

Nothing goes better with Clematis Jackmanni than Gloire de Dijon Roses; the colours blend beautifully, and the plants seem to do well together.

Clematis as Pot Plants.

What climbing perennials will do in pots? We have an arch at the kitchen door, but there is only a pavement below, and no soil. The pots are glazed.

You had better employ varieties of the Clematis, such as Jackmanni, La France, etc., which succeed better in pots than almost anything else. Wooden tubs would be better than glazed pots

Clematis Dying.

My Clematis plants grew well, and made plenty of foliage; but just as the blooms were forming they drooped and died gradually. How can this be prevented?

A frequent cause of the sudden collapse of these plants when apparently in full health and vigour is the want of a little care at planting-time. Clematis plants are usually purchased in pots, and in these the roots are frequently matted so as to form a compact mass or ball. When planted as turned out of the pots, it will probably be some considerable time before the roots strike into the surrounding soil; while they may never do so properly. In such cases the plant apparently goes on all right for a time, but frequently fails and dies sooner or later, especially if the ball of roots, as well as the surrounding soil, becomes really dry. Wireworms, again, are frequently accountable for losses of this kind. Occasionally a sudden failure occurs at the point of union between the stock and the scion—on this account plants raised from cuttings are preferable to grafted examples—and the plants should always be placed deep enough for the scion to be able to form roots of its own. Plants sometimes collapse also from a kind of "gout" in hot weather, but such cases are rare.

Clematis indivisa.

What is the correct treatment for Clematis indivisa lobata?

This beautiful species requires to be planted in a well-drained bed of rather light, but rich, loamy soil, in a well-heated greenhouse, and encouraged to make a vigorous growth during the summer. It flowers during the winter and early spring, and should be pruned directly the flowers are over. A light and sunny position is most suitable.

Clematis not Blooming.

A purple Clematis was not pruned at all, and has flowered freely this year, whilst a white one was cut down to twenty inches, and has not bloomed at all. Can you say why?

Some varieties of the Clematis bloom only on the old wood made the previous season, and others on the new growth; if the former are cut down, or pruned too late the previous season, there will be no flowers. Again, some varieties bloom much more freely, and in a smaller state, than others. Let the white one grow.

Climber for a North Wall.

I have a bare wall facing north, and want to cover it with a good climber. Can I grow a Clematis there?

A north aspect is not a good one for the Clematis. It needs the sun. Some of the Ayrshire Roses might succeed; or the Fiery Thorn (*Cratægus pyracantha*) and *Cotoneaster microphylla* may also be planted.

Cutting-back Clematis Jackmanni.

How shall I cut back Clematis Jackmanni?

If you wish to keep the plant low, with flowers at the base, cut it down to six or eight inches in the spring. If it is desired to extend it, the plant may be only lightly pruned. Almost anything can be done with this section of the Clematis, as they bloom on the young growth, not on the old.

Habit of Clematis Davidiana.

How does Clematis Davidiana grow—is it a bush, or does it require support? Also to what height and size?

This is a herbaceous or shrubby species, seldom exceeding three feet in height, and forming a compact bush. A central stake is quite sufficient.

Hardiness of Clematis.

I have recently planted a Clematis, Belle de Lyon. Does it require to be covered with straw during the winter months?

There is no necessity to mulch or protect these plants in any way. They are quite hardy.

How to Plant.

I purpose growing Clematis on a fence, in rather heavy soil. How far apart should each plant be, and can anything be done to improve the soil?

The plants should be placed about six feet apart. Have the border well trenched and liberally manured before planting. Set the Clematis rather deep, and spread the roots out well.

Pruning Clematis montana.

I have been told there are two varieties of Clematis montana, one requiring liberal pruning, the other the reverse. Is this correct?

There are certainly two varieties, Clematis montana and Clematis m. grandiflora, but both require the same treatment. They like to ramble at will, and scarcely require any pruning.

Pruning Duchess of Edinburgh.

When and how should a Clematis Duchess of Edinburgh be pruned?

This variety belongs to the Florida section, and only blooms from the old or ripened wood, so that it must not be pruned to any extent in the spring.

Quick-growing Clematis.

What is the quickest-growing, good covering creeper to train over a somewhat unsightly building facing north-west?

The common or wild Clematis, or "Traveller's Joy" (*C. vitalba*), is one of the best climbers for such a purpose as this, or *C. montana* or *C. flam-mula* might be planted. These are deciduous subjects. If you want an evergreen, you must plant Ivy of some kind.

Removing Clematis Jackmanni.

I have a Clematis Jackmanni growing at the back of the house, which I wish to move to the front. Should I cut it down in autumn, and remove it in the spring, or remove it in the autumn, and cut down in spring?

Move the Clematis in the autumn, but do not cut it down till the spring.

When to Plant.

When can I plant a Clematis (the ordinary purple kind) to train next year over a wire archway?

This may be done during the autumn—there is no better time; spread the roots out well and plant rather deeply.

Wintering Clematis montana.

In the spring I bought a small Clematis montana, and have had it in an 8-in. pot outdoors all the summer. What shall I do with it for the winter? Is it hardy?

The best thing to be done with this is to plant it out presently, say, in September, against a wall, fence, archway, or the like. It is perfectly hardy.

Worms and the Remedy.

I have a Clematis in a tub eighteen inches square, in which there are worms. Would lime-water get rid of them, and not do harm to the plant?

Yes, two or three doses of fresh lime-water will get rid of the worms, and do the plant good rather than harm.

COBÆA SCANDENS.

Cobæa scandens from Seed.

I should like to grow *Cobæa scandens*, and would prefer to raise the plants from seed. Can this be done?

This climber can certainly be grown from seed—this method of propagating it is the almost invariable practice. It germinates readily in sandy soil and a gentle heat; but if flowers are required the same year the seed must be sown early.

Cobæa scandens not Hardy.

Will a *Cobæa scandens* on an east wall live in the open ground through the winter, if it is protected in any way?

This plant is unfortunately not quite hardy, and it is rather doubtful if it would survive; if the winter were not very severe, it might. The nature of the soil would make some difference; if fairly light and well-drained, the chances would be considerably improved. Put a good heap of coal ashes over it before the cold weather sets in.

Foliage Dying Down.

I have young plants of *Cobæa scandens* in small pots. The foliage has died down. Does the new foliage or growth commence from the base, or from the existing stem? When ought I to repot them?

The plants may break up from the base, or from the stem—all depends upon the nature of the growth, etc.; but this is a matter of no consequence. Repot them as soon as the new growth is one or two inches in length.

Green Blossoms.

My *Cobæa* is a very fine one, covered with bloom, but all the blossoms are green. Is this usual?

This is quite in order; the blossoms expand of a pale green colour, and gradually assume a rich purple tint.

Need for Fresh Growth.

I have a *Cobæa scandens* in a tub in a small glasshouse. It made great growth last year, but has now withered at the base, having healthy foliage only towards the extremities. Does this usually happen?

This plant is very liable to become bare at the base in the second season, especially when protected from frost, as in this case; in the open air it is generally cut down to the ground, and makes a fresh growth from the base. Why not cut it down annually, and get new growth?

Plants not Blooming.

At the end of July I planted out two *Cobæa scandens* in the sunniest part of my garden. They are growing vigorously, and look healthy, yet there is no sign of a flower. I have watered them regularly. Can you account for it?

These plants were put out too late, and have not made sufficient growth. They ought to have been planted out in May, or the early part of June. They may do well next year.

Position Out of Doors.

Can *Cobæa scandens* be grown out of doors? What soil suits it best?

This plant succeeds as well in a sheltered position out of doors as under glass; and grows and blooms freely in any good, loamy soil, with proper drainage.

Wintering Pot Plants.

I have some *Cobæas* trained inside a verandah; the pots stand outside. I want to keep them for next year. When should they be cut down?

The pots must not be exposed to the open air all the winter, or the roots will perish; take them into a greenhouse or shed to which frost cannot enter. Cut them down in the spring.

COLEUS.**Bedding Out.**

I want a few beds of dark red *Coleus* edged with *Echeveria* in my garden. Could I raise these from seed, or will it be necessary to purchase plants? I have only a frame.

The plants cannot be raised from seed without heat. You must procure plants, and as these are rather tender they should not be put out before the weather becomes warm and settled, in June, keeping them in the frame if they come to hand before that time.

Coleus and Mealy Bug.

I have grown *Coleus* very successfully for some years, but lately they have been attacked by mealy-bug. Are these plants particularly subject to this disease?

Yes, the *Coleus* are particularly liable to be attacked by this pest, which, by the way, is an insect, not a disease. It may be destroyed by just touching each insect with a brush dipped in benzoline, afterwards sponging the affected parts with a strong infusion of soft soap; or vapourising with nicotine will clean the plants, without any trouble.

Coleus Cuttings.

When is the best time to take *Coleus* cuttings?

Coleus cuttings are best struck in the spring—March to May—when any bit of the young growth from old plants will form roots in sandy soil, in a warm house or hotbed, in a few days. Cuttings may also be struck in the autumn—September, or early October—in a gentle warmth.

Cultural Hints.

What can be done to improve the appearance of *Coleus* leaves?

There is nothing like good culture to make these plants look bright and effective. Give them weak liquid manure, with a solution of sulphate of ammonia or nitrate of soda occasionally when the pots are full of roots, and keep the syringe off them, especially if the water is hard.

Leaves Curling.

Can you tell me the cause of some of my *Coleus* seedlings curling their leaves upwards? They are potted in ordinary good soil, and placed on a sunny shelf near the glass in a heated house.

This may arise from various causes. The plants may be infested with some insect, such as red-spider or green-fly, which must be got rid of by vapourising the house, or dipping the plants overhead in an insecticide. Again, a sunny shelf, presumably without shade, is hardly the place for these plants when the sun is powerful; we have known them to curl up simply from the intense heat and drought. They should be lightly shaded, or else be put down on the bed or stage.

Specimen Plants.

I want to grow a specimen pot of *Coleus*. I have seen some in 12-in. pots, where all the shoots seemed to come singly from the base of the plant. The effect is much better than I obtain by pinching each shoot after it has made about four leaves. How is it managed?

Specimen plants of the *Coleus* are frequently obtained by placing several rooted cuttings in a large pot, but this is not good culture. Proper specimen plants are grown from a single cutting, this being stopped as it grows, till the required height is obtained.

Winter Temperature.

Please inform me why the leaves of my *Coleus* fall, or if it is natural? It is in a cold house, temperature forty to fifty degrees.

The *Coleus* are tender plants, and the leaves are certain to fall in a cool house. It is useless to try to keep them alive through the winter in a low temperature—they require a steady warmth of sixty to sixty-five degrees.

CRINUMS.

Compost for Crinums.

What is the most suitable soil in which to grow Crinums?

A compost of loam, leaf-mould or peat, and sand, will grow them very well.

Crinums in an Exposed Situation.

I have received some bulbs of *Crinum Powellii* and *crassiflorum*; but this is a very exposed spot, open to the winds even in the most sheltered position. I have a cool and a cold greenhouse. Would it be best to pot them, or should I risk planting them out?

As the situation is so exposed, it would be better to grow these plants in one of the greenhouses—either will do.

Cultural Points.

Must Crinums be kept on the dry side? Do they like the shade?

Crinums need plenty of water while in growth, but no shade.

Depth to Plant.

I have just purchased some bulbs of *Crinum Powellii*. They are quite eighteen inches long. How much should be left above the ground in planting; or, if the whole bulb should be planted below the surface, how far below?

The bulbs of this subject should be planted with the crowns four to six inches below the surface. In the open air they require a sunny, sheltered position, and a light, deep, well-drained soil.

Size of Pots.

Could Crinums be grown successfully in lard tubs, or must pots be used? If the latter, what size would you recommend?

Lard tubs will do for this purpose, but they must be carefully burnt out inside before use, and extra well drained. For pots, use 6-in. or 7-in. diameter, according to the size of the roots.

CROCUSES.

Crocus and Edging Plants.

A border of Crocuses has an edging of blue *Aubrietia*, which in time will spread and cover the former. If left, will the Crocuses be able to come through next year, or should the *Aubrietia* be cut?

The Crocuses will push up through the *Aubrietia* all right, but as the roots of the latter will rob the former of nourishment to some extent, it would be well to give a little manure.

Depth to Plant.

How deep, and how far apart, should Crocuses be planted?

Plant these three inches deep. If a brilliant effect is desired the first season, they may be planted an inch apart, but it will be necessary to take them up and replant for the following season. If two or three inches is allowed between the corms, they will not require to be touched for about three years.

Effect of Defoliation.

Several hundred *Crocus* bulbs were lifted from the ground, and the foliage cut off directly they had finished blooming. Will they be of any use next season?

These mutilated bulbs cannot be expected to do much good, and scarcely

to bloom at all, next season. As fine flowering roots are so inexpensive, we should throw the whole away and purchase a fresh stock.

Mice and Crocuses.

I have been planting a border with Crocus bulbs, and as a preventive against mice I coated the bulbs with red lead. Two days after I missed eight or nine bulbs, and traced some of them to a mouse-hole in the wall. Could I dip the bulbs in paraffin before planting, or is there any other effective means of protection?

If there was sufficient red lead on the bulbs, the mice may have suffered, and will not return to them. It would be dangerous to dip the bulbs in paraffin. Bread-and-butter, with a good spreading of phosphorous paste, is perhaps the best remedy for mice. It may be put down at night, and removed in the morning, and if it does not kill all the mice, they will avoid going near the same place for some time after they have had one dose.

Planting in Grass.

For Crocuses in grass plots, is it better to dibble a hole, drop in the bulb, and fill in with soil, or to lift the grass and soil, place as required, and then cover up again?

It is not a good plan to plant with a dibber. Cut a piece of the turf clean out, and then plant and return it; or else lift the turf, and put in the bulbs, which should be only just covered with soil; deep planting is unnecessary.

CYCLAMEN.

Culture of Hardy Cyclamen.

Can you give me any hints about the culture of the hardy Cyclamen?

Put the plants out in good, loamy soil, with free drainage. They like a shaded or partly-shaded position, and should be sheltered from cold north and east winds. A little spent lime or old mortar in the soil is beneficial, also some leaf-mould, or peat. Always keep the soil moist.

Cyclamen from Seed.

When is the correct time for sowing seeds of Cyclamen, to be grown in the garden?

The Persian Cyclamen cannot be grown outside, as it blooms in the winter; but if you mean the hardy kinds, they may be sown in January, and grown on under glass until they are strong enough to plant out.

Deformed Cyclamen.

I have some two-year-old Cyclamen in 8-in. pots. They have not bloomed at all well, many of the blooms being fasciated. I kept them growing all last summer, and brought them into the greenhouse in September, in a heat of from fifty to seventy degrees. Should I have dried them off?

Fasciation will occur at times, but when it becomes at all common it is a sign that the plants are out of health. The pots mentioned are too large for only two-year-old plants—the 6-in. or 7-in. sizes would be quite sufficient. It is not right to keep these plants growing on steadily all the summer, nor should they be actually dried off; the best plan is to gradually harden them off after flowering.

Hardy Cyclamen on a Rockery.

I wish to establish some hardy Cyclamen on my rockery. Had I better commence with bulbs, or with seed?

It will be much better to purchase the bulbs, or plants in pots. Seed of some of the varieties can be obtained, but it will take about two years to get good plants by this means.

Pot Plants of Hardy Cyclamen.

What is the proper treatment and culture of the hardy Cyclamen as a pot plant?

The hardy Cyclamen (*C. coum*, etc.) succeeds best, as a rule, when grown in pans. If pots are employed they should be wide and shallow, with plenty of drainage. The most suitable soil is a good, light loam, with a rather free admixture of peat or leaf-mould, and some sand. In the summer they should be kept in a cool, shady spot in the open air, and always moist. They bloom best in the shelter of a cold pit or frame.

Starting Cyclamen.

I have a nice lot of Cyclamen corms, which I dried off after the plants had flowered. When starting them again, shall I put them in the pots in which they are to flower, or start them in boxes, and pot them on after growth has commenced?

The treatment you have given them is quite wrong. Cyclamen should never be dried off. When standing them out after flowering, they must still not be allowed to become very dry, and when they begin to start into growth a little again, shake them partly out of the soil, and repot them. After this, they had better be kept in a lightly-shaded frame until the time comes to house them again.

Treatment after Flowering.

How should I treat Cyclamen after they have finished blooming?

Harden the plants off a little, and place them out of doors in a shady position, standing the pots on ashes, and keeping the soil just moist. When they show signs of fresh growth, in July, repot them, and put them in a frame.

When to Plant.

When is the best time to plant hardy Cyclamen?

The best time to plant the roots is in early autumn—September or October. Seed should be sown in the spring.

DAFFODILS.

Absence of Bloom.

Crowded together in my garden are clumps of Daffodils, which have not bloomed for years. The bulbs are of the size of ordinary wild Daffodils. Would they be likely to bloom if taken up and divided?

These bulbs are evidently starved, and need replanting in fresh soil. Take up, divide, and replant the best bulbs, placing them six or eight inches apart. They may not flower next season, but are almost sure to do so the following year.

Cutting Flowers.

Is it detrimental to the future welfare of Daffodil bulbs to pick the flowers, leaving the foliage?

It is decidedly not detrimental, but rather beneficial, to the future vigour of the bulbs, to gather the blossoms. The foliage must be carefully preserved until it dies away naturally.

Cutting-down Foliage.

Can the foliage of Daffodils be cut down after they have flowered, without injuring them for the next season?

Although this may be done in some places without much harm resulting, it is a barbarous practice, and always likely to render the bulbs flowerless the following season. Let them alone until the leaves at least commence to die away, if possible.

Daffodils and Bedding Plants.

As my Daffodils are getting over, I am thinking of putting summer-bedding plants in their places. Would you advise the removal of the bulbs, or that the other things should be planted between them?

If the summer-bedders can be conveniently planted between, or over, the Daffodils, that will be the better plan, as the latter will have a chance of ripening off, and the blooms will be finer next year. Otherwise, take up the bulbs carefully, and lay them in some good soil in a spare bed until the foliage dies down.

Daffodils Seeding.

After my Daffodils had finished flowering, I allowed the seed-pods to form and die down, instead of removing the flower-stalks. Will this affect the size of the blooms next season?

If the seed was allowed to ripen, this would impoverish the bulbs to some extent, but it will make little or no difference in the size of the blossoms next season.

Dividing Bulbs.

I have some beds of Daffodils which have been undisturbed for years. Had I better take these bulbs up, and divide them, and when would be the best time to do so?

It would certainly be advisable to lift, divide, and replant these bulbs, under the circumstances; the small bulbs should be replanted separately. October is the best month for this work, preferring the early part of the month.

Improving Soil.

How can I enrich the soil in which a quantity of Daffodils are grown?

If the soil is light, add a moderate quantity of well-decayed manure, and some burnt earth, or wood or other ashes; but should it be heavy, leaf-mould, if obtainable, would be better. The manure should be worked in before planting, or while the bulbs are out of the ground—they will take no harm if lifted for a short time.

Lifting Bulbs.

Last autumn I planted some single Daffodils, which bloomed very well. I took them up in June, with the idea of storing until next autumn. I am told that they will not bloom next year. Is that so?

There is no reason whatever why these bulbs should not bloom again next season, if planted in the autumn. But if their growth had not quite ripened off when you took them up, that would go against them.

Maintaining Vigour.

What is the best method of keeping Daffodils in good blooming condition from season to season without moving them?

The only way to maintain the vigour of the plants without disturbance is to top-dress them occasionally (during the growing season) with a sprinkling of some good artificial manure or fertiliser.

Saving Seed.

I have some excellent Daffodils among a lot of mixed bulbs, and should like to try raising some plants from seed. Would it be worth while? If so, what should I do to save the seed?

It is certainly advisable to save seed if possible; there is no telling what choice variety it may produce. To ensure plump pods and plenty of fertile seeds, the flowers should be cross-fertilised when fully expanded, transferring the pollen from one flower to another by means of a small camel's-hair brush. Let the pods remain on the plants until fully-developed and turning yellow, then gather and finish in a sunny window, taking out and storing the seeds when quite ripe and dry. Seedling Daffodils, or Narcissi, usually bloom in three or four years' time, with ordinarily good culture.

Starting Pot Plants.

I have potted some Daffodils, and placed them in a dark cupboard. Should they be watered at any time?

If potted in soil, these bulbs would be better plunged in and covered with ashes or Cocoanut-fibre, in a shed or sheltered spot out of doors, until the growth has commenced. When placed in a cupboard, keep them there for about six weeks, until plenty of roots have been formed, and the crowns are beginning to move. Give water if the soil or other material becomes dry, but not otherwise. When it is seen that growth has started, bring them out, and gradually introduce them to light and warmth.

Treatment of Pot Plants.

When Daffodils in pots have finished flowering, should they be left in for next spring, or taken out and dried, and replanted in November, for the following season?

If of choice kinds, these may be kept in pots, placed in a cool frame or pit, and duly supplied with water until the foliage begins to die off, when it should be gradually reduced. When the bulbs are quite matured turn them out and dry them, or they may be planted out in a sheltered bed of deep, rich soil.

Unsuitable Soil.

My Daffodils grow a lot of foliage, but never a sign of bloom. What is the cause?

In unsuitable soils, these bulbs frequently cease blooming after a time, and produce nothing but leaves, owing to being worn-out. Unless the soil can be improved, the only thing to do is to buy fresh bulbs every year or two.

Varieties for a Town Garden.

I have tried to grow mixed Daffodils in a small garden in town, but scarcely any flower after the first year. What varieties would be best for permanent positions to avoid yearly planting?

Such kinds as Emperor, Empress, Horsfieldii, Obvallaris, Golden Spur, rugilobus, Spurius, Sir Watkin, etc., are the best for this purpose, but you cannot expect any of them, however fine the bulbs, to flower for more than two or three years. Under the unfavourable conditions of a smoky town garden, they gradually become debilitated, and cease to bloom.

DAHLIAS.**Bottom-heat for Cuttings.**

I have some very fine Dahlia tubers, from which I wish to take cuttings. I have a cold frame, in which is a small heating lamp. Could I hope to succeed in striking the cuttings under these conditions?

You cannot strike cuttings of Dahlias in a cold frame, and it is very doubtful if they could be managed in one heated only by an oil lamp; they would require a great deal of care. What is wanted is a gentle hotbed or propagator.

Dahlias Failing.

I planted out some choice Dahlias at the beginning of June. They appeared healthy, but made very slow growth, attaining no higher than about twelve inches, although well supplied with water during hot weather. A few days ago they suddenly drooped, and I took one of them up for examination. There were plenty of fine, fibrous roots, but no tubers appear to have formed. Can you form any opinion of what may be wrong?

There must be something wrong with the soil for the plants (if healthy when put out) to fail in this way—this is proved by their making so little growth, though watered. As a rule, Dahlias grow away very freely in good,

rich soil, and, though the tubers would be only small yet, they ought to have begun to form. Give the bed a good dressing of lime, and if the plants are not too far gone, pot them singly in fresh soil, and try to get some "pot-roots."

Definition of Terms.

Can you tell me the difference between "pot-roots" and "land roots" of Dahlias? I take it that "pot-roots" mean cuttings.

"Pot-roots" are not cuttings, but roots struck (from cuttings) in small pots the previous season, and kept there. When turned out, they are about the same shape as the pots. "Land roots" are such as were planted out the previous season, but "ground roots" is a better term.

Disbudding for Exhibition.

I have some Dahlia plants with which I am competing in a flower show. Is it necessary to disbud them to produce large blooms?

The buds will certainly have to be thinned out, more or less, in order to obtain flowers of exhibition quality, the number to be removed depending, to some extent, on the variety.

Flowering Plants from Seed.

When is the best time to sow Dahlia seed, to obtain flowering plants the same season, and what is the treatment?

The earlier in the season the seed is sown the better the result will be, but it may be done up to April. Sow thinly in pans or boxes of light soil, and place them in a moderate hotbed or warm house. Pot the little plants singly when large enough, harden off, and plant out early in June.

Overgrown Plants.

Some of my Dahlias are over seven feet high, and none under six feet. Is it a sign that the plants are weak? I well manured the ground before planting them, and have given copious supplies of water to them since, with plenty of attention in the way of syringing, etc.

It is the result of liberal treatment and the syringing that has caused the Dahlias to grow so tall, or it may be that they are partly under the shade of trees.

Raising Seed without Heat.

Could I raise Dahlia seeds by sowing in March in boxes, with glass over them, and placing same in an unheated conservatory?

It might be just possible to raise plants from seed in the manner described, but they would not flower to any extent the same season.

Seeding Dahlias.

I want to save some seeds from my Show and Fancy Dahlias. How shall I treat the plants, so that they will produce the pollen and stigmas necessary for crossing same?

You will find the anthers and stigmas at the base of the florets; to obtain the pollen, a part of the tubular floret may be cut away, and the pollen transmitted from one flower to another by the aid of a small camel-hair brush, or pencil. Wet is the great drawback in seeding Dahlias. If the florets are shortened back, and the wet shaken out of the flowers every morning, they will seed better. The pollen can only be transferred when the flowers are quite dry.

Shrivelled Leaves and Green-fly.

My Dahlias are infested with green-fly, and the leaves are much shrivelled. Can you suggest a remedy?

These plants must be syringed with some good insecticide, such as the infusion of quassia and soft soap. The shrivelling of the leaves sounds as

if the plants did not get enough water. Dahlias require a lot of water in dry weather, and if they are frequently syringed or sprinkled overhead, this will greatly encourage a vigorous growth and help to get rid of the aphides as well.

Size of Show Boards.

I wish to make some show boards for an exhibition of Cactus Dahlias. What would be the correct sizes for twelve and six blooms?

For twelve blooms the size should be twenty-four by eighteen inches. The correct half-size is eighteen by twelve inches. These dimensions should suit nicely, unless the blooms are very large.

Soil and Manure.

What is the proper soil for growing Dahlias? Do they require manure?

To grow Dahlias well, the ground should be thoroughly trenched to a depth of three feet or so, working in a heavy dressing of half-decayed stable or other manure; this should be done some little time before planting. In the early summer, a mulch of littery manure should be spread round each plant; and, if the weather is dry, and fine flowers are desired, liquid manure of some kind should be given about once a week. The Dahlia is one of the "hungriest" plants we have, and cannot be grown on the starvation system. It is not particular as to the nature of the soil itself, whether light or heavy.

Starting Tubers in Frame.

What is the best way to start Dahlia tubers in a heated frame?

Lay out the roots in the warm frame, with some fine soil between them. Do not separate the tubers, nor bury at all deeply; leave the collar of the plant—where the eyes are—free.

Starting Tubers Outdoors.

In starting Dahlia tubers in the open ground, should the roots be broken off from the main stem, or the whole tuber be planted and divided when the plant shows above the ground?

The roots must not be divided at all, the growth buds or eyes being situated on the base of the stem or collar of the plant, and not on the tubers. Plant them as they are, about the middle of May, putting a good forkful of manure over each, and, if too many shoots appear, thin them out to five or six.

Stimulant for Growing Plants.

I have been told to give my Dahlias a little sulphate of ammonia occasionally. How often should they be watered with this?

A little sulphate of ammonia is a very good stimulant for these plants, but do not give them too much or too often; a solution of one ounce to the gallon is safe. If it touches the leaves, wash it off with clean water. It may be given about once in ten days or a fortnight.

Storing Tubers.

Please advise me how to keep Dahlia tubers during the winter. Is it possible to dry them too much before packing away?

The tubers must not be allowed to become too dry, or they will shrivel and perish. Much depends upon the place in which they are stored, whether naturally damp, or dry. If the former, the roots only need to be laid out on a surface of ashes or soil, but in the latter case they ought to be at any rate partly surrounded with Cocoanut fibre, sand, or fine, light soil, in a half moist condition. Look them over occasionally during the winter, and, if any signs of shrivelling are apparent, place them in damp fibre or sand; if any damping is observable remove to a drier position. It is a mistake to over-dry the roots, but we never "clean" them properly until the soil has become moderately dry—and then do not carry it too far. A covering of

straw is excellent, especially if there is any danger of frost, while it also prevents the tubers becoming unduly dry.

Striking Cuttings.

What method shall I adopt to obtain cuttings from some *Dahlia* tubers saved from last year?

The roots or tubers must first be laid out and started in a warm house or pit early in the spring. When in growth, take off the cuttings at a length of about three inches, and insert them in pots of light, sandy soil, placing them in a rather warm, close frame.

Taking Cuttings.

When striking cuttings of *Dahlias*, should I take them with a piece of the tuber, or not?

If only a few plants are wanted, you may take the cuttings each with a small piece of the tuber; but when this is done, no more shoots will spring from that point. They strike better if taken with a good "heel," however.

Training Plants.

Are *Dahlias* grown for show trained like *Chrysanthemums*, say, three shoots to a plant, and one bloom to each shoot; or should they be grown with three or four shoots to a plant, reserving one shoot with one bloom, to get size?

By the plan suggested, the blooms would probably be too large and coarse. There are different methods of training. Some grow them almost in the "bush" form, merely thinning out the shoots and buds as required; but probably the best plan is to take up five or six shoots apiece, and allow one bloom at a time on each.

Young Plants for Exhibition.

In growing *Dahlias* for exhibition, is it essential to have young plants?

It is not absolutely "essential" to grow young plants for show purposes, but as they almost invariably produce larger blossoms than the old roots, they are usually employed.

DAPHNES.

Aspect for *Daphne cneorum*.

Is a sunny, but rather sandy slope, a suitable position for *Daphne cneorum*? The plant looks healthy, but has not grown much in two years.

The position indicated is fairly favourable, but the soil should not be too poor; probably it needs a little manure.

Culture of *Daphne mezereum*.

When should *Daphne mezereum* be planted, and what treatment does it require?

This variety is a hardy shrub, which may be planted in the autumn or early spring, preferably the former. Once planted, it will thrive without trouble in any fairly good loamy or garden soil. No special cultivation is needed.

Hardy Varieties.

Can you tell me of two or three varieties of *Daphne mezereum* suitable for growing outside?

In addition to the typical form, *D. mezereum*, which has flowers of a lilac-pink, and red berries, there is a variety with white blossoms, and a crimson one called *atro-rubrum*. They are all hardy.

Pot Culture.

What shall I do to a *Daphne indica rubra*, now in flower, to ensure plenty of new growths for flowering next year? It is a small plant, in a 4-in. pot.

After flowering, do not cut the shoots back at all—that is, if the plant is

of a good shape—but when it is in growth again, repot it into a 5-in. or 6-in. pot, using the best fibrous peat, with plenty of sand, and free drainage. A light shade from hot sun is beneficial, but it must not be overdone. The plant may be stood out of doors in a half-shaded spot for a short time in the summer, but it seldom does much good outside a greenhouse.

Propagating Indian Varieties.

I have a moderately warm greenhouse. Can I work up a stock of *Daphne indica rubra* by taking cuttings from a plant?

This plant can be raised from cuttings, but it is a delicate process, requiring special care and experience, and we cannot recommend you to attempt it.

Pruning *Daphne mezereum*.

I have several plants of *Daphne mezereum*, also a white *Daphne*. They are mostly large, well-rounded shrubs, with "twiggy" branches, but a few are of an upright growth, and these flower better than the more bushy ones. How and when should they be pruned?

Daphne mezereum may be pruned in the spring. Where the growth is crowded, thin out some of the weaker shoots, and shorten back any extra long or strong ones, so as to obtain shapely plants. The white form of *D. mezereum* should be similarly treated. The natural habit of these plants is to grow upright.

Striking Cuttings.

When and how should cuttings of a *Daphne cneorum* be taken?

Cuttings of the young shoots, getting a little firm, should be inserted in sandy soil, in a frame in the autumn.

Treatment of Indian *Daphnes*.

A year or two ago I had a plant of *Daphne indica rubra*, which gradually "went off." Does it require any special treatment as to soil, watering, etc.?

This plant requires very careful culture, especially in the matters of watering and potting. No water must ever be given until the soil is nearly but not quite dry, and then a thorough supply. It also requires plenty of light and fresh air, and must be very firmly potted in good, fibrous peat, with some sand, and free drainage.

Varieties for a Cold Greenhouse.

Which of the three *Daphnes* named would do best in a cold greenhouse—*Daphne elegantissima*, *D. indica alba*, or *D. rubra*?

Of the three kinds mentioned, *D. elegantissima* is much the hardiest; this has variegated foliage, but it seldom flowers, the blossoms (when there are any) being pink. The other two require very careful culture, and should have frost just excluded.

Wintering Seedlings.

I am anxious to save a self-sown seedling *Daphne mezereum*, which I found growing in a large pot containing an evergreen. Shall I take it up and repot it, or let it take its chance of living through the winter in the garden?

The seedling had better remain where it is; but if it could be sheltered in some way in case of severe weather setting in so much the better. Plant it out carefully in a good position in the spring, as soon as new growth commences, and it will doubtless succeed.

DATURAS (See also *Brugmansias*).

Cutting-back *Daturas*.

My *Daturas* are planted out during summer, and flower freely. Should I cut them down and withdraw water, and winter in cold house, and grow them on in a greenhouse?

They should be taken into the greenhouse, but not dried off or cut back.

They may require stopping back a little in the spring, but to cut them when you suggest might prove fatal.

Effect of Heat.

Will a *Datura* bloom in heat in the winter?

If the *Datura* is the greenhouse species, *Datura suaveolens*, or the double variety, it should have a light position in a greenhouse. It would grow freely in heat, but would fail to flower.

Greenhouse Treatment.

I have a *Datura speciosa alba* in a cold greenhouse, with a small oil-stove during cold weather, to keep the frost out, but the temperature is often down to thirty-eight or forty degrees in winter. What treatment shall I give the plant?

Water should be given very sparingly during the winter, keeping the soil almost dry, generally. This plant is nearly hardy, but frost must be excluded by some means; the temperature named will be quite safe, as a minimum.

Late-sown Seed.

I sowed some *Datura* seed in August, and it is coming on nicely. Will the young seedlings need shifting through the winter, or can they be left in the seedling soil? Some have two sets of leaves on.

Unless they grow very strongly, do not disturb the seedlings during the winter, but keep them in the seed-pan until the spring. The seed was sown very late—it would have been far better to sow in the spring. The temperature should range from fifty to sixty or sixty-five degrees. As they were started so late, it is doubtful if the plants will bloom next year. Use good, loamy soil, and give plenty of water in the summer.

Wintering Border Plants.

My *Daturas* are in full bloom in the open border in October. Should they then be taken up, water withheld, kept frost-proof, and in February brought into heat?

The *Daturas* had better be taken up, potted in large sizes, and brought into the greenhouse. Keep them safe from frost, but not too dry at the roots. There is no necessity to bring them into heat in the spring—they are cool-house plants.

DELPHINIUMS.

Cutting-down Delphiniums.

Will you let me know the proper way to treat a *Delphinium*? Should it be cut down to the ground?

The stems of these plants should be cut down close to the ground as soon as they have flowered and the foliage has died away, but not before.

Methods of Propagation.

What is the best way of taking cuttings of *Delphiniums*? I have some rather choice ones, and want to increase their number.

Cuttings of these plants may be struck by inserting the shoots, when four to six inches in length, in pots of sandy soil placed in a frame, preferably with a gentle bottom heat. The best way to increase the plants is by means of division, which should be done just as they are beginning to grow, about April.

Moving Seedlings.

When is the best time to move *Delphinium* seedlings into permanent quarters?

This may be done either in autumn or spring—if the soil is light and dry, the former would be better. The bed must be well dug, or trenched, to a depth of between two and three feet, and be liberally manured as well.

Second Blooming.

If Delphiniums are cut down after flowering, will they bloom again in autumn? Mine are over five feet high, and if cut to ground only stumps would be left.

The plants may be cut down to a height of about a foot, and, especially if the weather is showery, they will soon break up again. When in growth, some liquid manure may be given, and a mulch of old hotbed manure would also do good in dry weather.

Sowing Seed.

I set some Delphiniums at the beginning of September, in a deep, broad box, in a shady place; they do not get any rain—should I water them?

Seeds sown in boxes must be watered as required, for they will not germinate in dry soil. It was rather late to sow them, and, instead of the box being in a shady place, it should be in nearly the full sun, in a sheltered spot. Lay a square of glass over the box, and water regularly, using a can with a fine rose.

When to Replant.

I wish to lift some Delphiniums, and replant further back in the border. Should this be done in autumn or spring?

It would be better to leave these until about February or March. The ground should be dug deeply, and some manure worked in.

DEUTZIAS.**Cutting-down.**

Should *Deutzia gracilis* be cut down every year after flowering?

Yes, if it is desired to keep the plant to a moderate size; but, if large samples are wanted, let them grow on, with very little pruning.

Deutzia not Flowering.

I have an old *Deutzia* that will not flower. How must it be treated?

Cut the plant back a little, about May, and shortly afterwards repot it, encouraging a vigorous growth during the summer, and ripening this well in the autumn by standing it out of doors. Or else plant it out in the open.

How to Take Cuttings.

Can *Deutzias* be propagated by means of cuttings? If so, when and how should it be done.

Cuttings of the *Deutzia* strike readily. They may be taken in the spring—when they should consist of the young shoots, each with a “heel,” struck in a moderate warmth; or in the early autumn, when pieces of the young, ripened wood should be inserted firmly in pots, keeping them in a cool house or pit through the winter. Use a light, sandy soil.

Pruning *Deutzia gracilis*.

I have just potted, in 7-in. pots, three *Deutzia gracilis*, strong plants, with canes two feet long, dormant. Shall I prune these first, or wait till the bloom is over? I propose growing them outside, but can give protection of a greenhouse during frost.

These plants should certainly be allowed to bloom first, pruning them afterwards. They may, of course, be grown in the pots permanently, but you will find this plan entails a lot of care and labour in watering and “feeding,” and we should say it would be better to plant them out after flowering.

Suckers on *Deutzia*.

I have a *Deutzia scabra* which has bloomed very well. It was brought on in a cool greenhouse. It has several long suckers or shoots growing from the base. Should these be removed?

Let the suckers grow; but after pruning moderately, move the plant into a pot about two inches larger, and stand it out of doors for the summer.

DIELYTRAS.

Cultural Directions.

Can you tell me how to succeed with *Dielytra spectabilis*?

Procure strong roots, and plant them either in the autumn or early spring, in light, rich, loamy soil. A sheltered position should be chosen, as the young growth is rather tender. With a little care in watering when the weather is dry, no further treatment is required.

Dielytras as Pot Plants.

I have just procured some roots of *Dielytra spectabilis*, which, for the present, are in large pots. Will they succeed as pot plants, or should they be put out in the open?

The *Dielytra* does well in pots, and makes a very pretty specimen. Let it flower in a pot in spring, and afterwards turn it out into the open ground.

Forcing.

Can I do anything to a *Dielytra spectabilis* after flowering, so that it can be forced again next spring?

Do not attempt to force this plant two years running; young or fresh plants are better for this purpose. You can only plant it out after flowering.

Habit of the Plant.

My garden is on the outskirts of a large town. I have tried to grow *Dielytra spectabilis*, but it never reaches more than nine inches in height, and has very few flowers. Is this its natural habit?

The *Dielytra spectabilis*, which is classed with the *Dicentras*, and is also known as "Bleeding Heart," and the "Lyre" plant, when properly grown attains a height of two or three feet, with a number of curved branches, each bearing numerous pendulous flowers. It is one of the most charming hardy herbaceous plants, but, like many others, does not succeed so well in towns as in the open country. With reasonable care, and proper soil, however, they should do better than you describe.

Treatment after Flowering.

Please tell me how to treat a *Dielytra* after it has finished flowering?

Harden the plant off a little (if in a pot), and in the course of two or three weeks plant it out in a sheltered spot in the open air.

DORONICUMS.

Aspect and Soil.

Is it possible to grow *Doronicums* in a border somewhat shaded by a tree, and facing north? The soil is of a heavy, clayey nature, but fairly good.

The *Doronicum* is one of the hardiest and most robust of all early-flowering perennials, and succeeds capitally in a partially shaded position, as well as in a fairly heavy soil.

Cutting-down after Flowering.

My *Doronicums* have flowered, and the flower-stems are withered. Can I now take them up, and divide them?

The flower-stems may be cut away, but it is better to wait until the autumn before dividing; or this operation may be done early in the year, when the weather permits.

Inadvisable Practice.

Is it good to cut down *Doronicums* before they flower, to make them sturdier plants?

Nothing of the sort should be done. With some plants it is possible to

pinch out the points of the shoots when they are about a foot high, for the purpose you mention; but not even this should be practised with the Doronicum.

Propagation.

I want to grow a quantity of Doronicums. How are they propagated?

These may be raised from seed sown in spring, and wintered in a cold frame, planting out early in the following year; or the roots of the old plants may be divided.

Replanting Necessary.

I have a Doronicum which has grown to a considerable size, but the flowers have mostly been very small, and borne on short stems. Ought the root to be divided?

This plant should be lifted, divided, and replanted in soil that has been well worked and manured. This will be best done in the early autumn—September or October—as it is of an early-flowering nature.

DRACÆNAS.

Leaves Turning Yellow.

What is the reason of *Dracæna* leaves turning yellow? The plant has a number of new leaves, but it is the under ones that are going like this.

It is natural that the leaves should ripen off when new growth is proceeding from the top, although it often happens that they go off through the roots being in an unhealthy state. Examine the latter, and, if they are in good condition, do not disturb them, but give a little weak manure. If they are decaying—which often happens with these plants—be very sparing with water, and remove as much of the surface soil as you can, and fill in with fresh, which should consist of loam and leaf-mould, with some sand added. The leaves may be removed, but it is better for them to remain until they are quite ripened off.

Planting Outdoors.

Could I plant *Dracænas* out in a warm and sheltered garden? What manure may I give them?

These plants are frequently planted out of doors, being, indeed, almost hardy. The right time is when the weather becomes warm and settled, in June; they like a sunny, sheltered position. A little well-decayed stable manure is as good as anything. Almost any soil suits them, provided that it is not too heavy—a nice light loam is about the best.

Potting a Sucker

I have a *Dracæna* in the greenhouse, the broad, red-tipped variety. This summer it has sent up a young shoot, which is now four inches from the mould in the pot. Should this be taken off and struck by itself?

Leave the plant alone for the present. Separate the young growth, or sucker, in the spring, potting it in light compost, and, if possible, plunging it in a moderate hotbed till established and growing again.

Root-cuttings.

I have some *Dracænas*, and I am told I can propagate by root-cuttings; how do you take them?

If you turn a well-established plant out of the pot, carefully, so as not to break the "ball," you will notice a long, thick, white root, with its point in the drainage, or, perhaps, peeping out of the hole in the pot. Take this off as far up (or down, when the plant is reversed) as you can, and cut it into pieces from one to one and a half inches long, each with at least one perceptible joint; then bury them, to the depth of not more than an inch or two, in pots filled with any good light, sandy soil—peat and sand is

best, but a mixture of light loam, leaf-mould, and plenty of sand, with a little Coconut fibre, will do nicely. The pots must be well drained. Just moisten the soil once, and plunge them in a fairly brisk hotbed, where, with a due supply of moisture, the little plants will soon appear. The early spring is the best season. Put the old plant back into the pot carefully, with a little fresh soil, make all firm, and it will scarcely show the check.

Slow Germination of Seed.

Five weeks ago I sowed seed of *Dracæna* in a box, and placed it on a greenhouse shelf. Although I have paid particular attention to the watering, they have not yet come up. Is this ordinary?

The seeds of this plant are often a long time germinating. They would have come up more quickly if they had been soaked in tepid water before sowing. It would have been better to have sown on a gentle hotbed.

Striking Cuttings in Water.

How can I strike the top of a *Dracæna* in water? The plant has grown very tall.

Cut off four to five inches from the top, cutting under a joint; then put the top into an ordinary bottle filled with soft water, with a few pieces of charcoal. Keep on a shelf exposed to the sun in a greenhouse. In a few weeks healthy roots will appear, and it can then be planted out in a pot. This should be done in spring or summer.

Temperature and Gas.

Can *Dracænas* of the *indivisa* variety be kept in winter in a room where gas is burning at night? If not, will they be safe in a temperature just above freezing point?

These plants will stand a moderate amount of gas. At the same time, it is as well to remove them to another apartment, or, at least, to stand them down on the floor, when the gas is burning for several hours in succession. They would, of course, be more at home in the pure, moist atmosphere of a greenhouse. Being of a comparatively hardy nature, they will exist in a temperature just above the freezing point, but are far happier in a range of forty-five to fifty-five or sixty degrees.

Unshapely Plants.

I have two plants of *Dracæna indivisa*, which have grown about six feet high, and are bare at the bottom. Can I cut them across, and make them more shapely?

If you cut these down they will probably break out from the old stems, but only irregularly, and will never make shapely plants; this must be done in the spring. The proper way would be to take off the tops and strike them as cuttings (in a hotbed in the spring), and then cut up the stem into short lengths, when most of these also will grow in sandy soil in a moderate warmth; and cuttings of the semi-tuberous roots may also be utilised.

When to Repot.

How am I to know if my *Dracæna* requires a larger pot?

If the plant appears to be too large for the pot, or this is found to be very full of roots (on turning the ball out), it requires a larger pot. Do not use too large a size, as these plants do not like being overpotted; one about two inches larger ought to suffice.

Winter Treatment.

How should *Dracænas indivisa* and *Bruanti*, in pots, be treated in winter as regards watering, etc.?

Being evergreen subjects, the plants mentioned ought not to be allowed to become very dry at the roots at any time. In cold weather no water should be given until the soil becomes slightly dry, or nearly so, and then a fairly free supply, using tepid water, if possible.

ECCREMOCARPUS.

Cutting-down Foliage.

Should this season's growth of an *Eccremocarpus scaber* be cut down on the approach of winter?

As soon as the foliage dies off, cut down the growth to a moderate extent.

Essentials for Blooming.

I have some one-year-old *Eccremocarpus scaber* creepers. Are these to be looked upon as fairly permanent? Can I cut them back and transplant?

This pretty climber is a half-hardy perennial. The growth may be reduced considerably in the autumn, and a good shovelful of ashes placed over each root. In order to bloom well, the plant must make a vigorous growth in a warm and sunny position.

Plant not Flowering.

Will an *Eccremocarpus*, which grew a yard high last year, and did not flower, do so this—it is already some inches high?

Yes, this plant will be almost certain to bloom this season—that is, if it makes a vigorous and healthy growth.

Protecting Seedlings.

Will it be necessary to cover, or otherwise protect, some seedlings (in pots) of *Eccremocarpus scaber*, at the foot of a south wall? I want to plant some in tubs, to climb up the supporting pillars, which are of wood.

As the plants are young and in pots, either cover them with a good depth of Cocoanut fibre, or something of the kind, during severe weather, or else remove them to a greenhouse or sunny window for the winter. The *Eccremocarpus* succeeds fairly well in tubs (in a light, rich soil), and is a capital pillar-plant.

Wintering an *Eccremocarpus*.

Shall I take up the roots of *Eccremocarpus scaber* for the winter, and keep them in pots in the greenhouse, or leave them where they are in the open?

If the plant is growing in a sheltered and sunny position, it will probably survive the winter quite safely if the root is covered with a good heap of dry ashes or Cocoanut fibre, and certainly if the soil of which the border consists is fairly light and well-drained. The covering should be applied before the soil becomes frozen.

ECHEVERIAS.

Lower Leaves Falling.

Please tell me how to prevent *Echeverias* losing their lower leaves in autumn?

These plants always lose their lower leaves, to some extent, towards the autumn; but in place of these they usually throw out offsets or growths from the base, by means of which the plants may be propagated.

Propagation from Leaves.

Will you tell me how to propagate *Echeveria secunda glauca* from leaves? I have a propagator and cool greenhouse.

Cut the leaves off close to the stem, and insert them in pots or boxes of very sandy soil—pure sand will do. Place them in the propagator, in a temperature of sixty to seventy degrees, but keep them on the dry side until roots have been formed. When well-rooted and growing, remove them to the greenhouse, and pot them off singly as they begin to grow.

Raising from Seed.

Can I grow Echeveria from seed sown in the spring, to flower the same year?

These plants are readily raised from seed; but, in order to obtain good plants by the early summer, and flowers the same year, it must be sown early, in a genial warmth, and kept growing on steadily.

Treatment of Offsets.

A number of small shoots are growing on my Echeverias. What can I do with them?

In the spring, as soon as the plants begin to grow again, take off the offsets, and prick them out in shallow boxes of sandy soil, where they will make nice plants by bedding-out time. The old plants may be retained or not, as desired.

When to Divide.

Should Echeverias be divided when put in the frame for the winter, or when taken up to bed out?

The usual way is to dibble out the offsets in the autumn, but, if more convenient, the plants may be roughly boxed as they are, and divided in the spring.

Wintering Echeverias.

Can you suggest a means of protecting a number of fine Echeveria plants through the winter?

If you have any suitable quarters for these plants, take them up, plant them closely in boxes, and winter in the sunny windows of a fairly warm room. If this cannot be done, there is no alternative but to leave them as they are, but provide a quantity of dry litter, or straw, with which to cover them well, on the approach of frost, uncovering again in mild periods.

EUCALYPTUS.

Cutting-down.

I have a two-year-old plant of Eucalyptus, which has become too tall. Can I cut it down without injuring the plant?

This plant may be cut down safely to any reasonable extent. It should be done in the spring.

Eucalyptus Outdoors.

I have an Australian Gum tree (Eucalyptus), which has grown to a height of over five feet, in a pot, and is now too tall for my greenhouse. Would it be safe to plant out in the open in a sunny and partly sheltered position?

This plant had better be put out in the open, in the most sheltered position that can be found. May is the best month for this, as it will get a good hold of the ground before the winter. It may be protected in any convenient manner, on the approach of winter, but if the weather is not too severe, these plants often survive several or many winters, and attain a goodly size—that is, in a sheltered position.

Potting Soil.

What soil would you recommend for potting a Eucalyptus?

A compost of light loam, with some leaf-mould, or peat, and sand added, is best for these plants.

Striking Cuttings.

How should I strike cuttings of a Eucalyptus, with any chance of their growing?

It is not an easy matter to strike cuttings of this subject. Take off some
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of the young sideshoots, each with a heel, or getting a little firm at the base, and insert them firmly in well-drained pots of sandy soil, in the early spring. Keep them cool but close until the cuttings have callused at the base—if they do so—and then plunge them in a gentle hotbed.

Unhealthy Foliage.

The foliage of my Eucalyptus appeared healthy until February, when the leaves dried up. The plant was regularly watered, except in very cold weather. It is three and a half feet high, in a 6-in. pot, and stands in a sunny window in a sitting-room. Can you suggest a remedy?

Sponge the leaves gently, on both sides, with an infusion of soft soap in water, with a little sulphur added. Water the plant about twice with a solution of sulphate of ammonia or nitrate of soda, half an ounce to the gallon of water, with some weak, clear soot-water between, and then move it into a 9-in. pot—the 6-in. size is too small for so large a plant. The Eucalyptus requires plenty of water (but not for a time after repotting), and you will find a very little salt, dissolved in water, occasionally, very beneficial to this plant.

EUCCHARIS LILIES.

Failure to Flower.

I have some Eucharis Lilies in pots. They look healthy enough, and throw up good stout leaves, but do not flower. I grow them in a fairly warm house, with a minimum temperature of fifty-five degrees in winter, by night, rising to sixty-five degrees by day; and after March 1st I can, by the aid of the sun, maintain a temperature of sixty to seventy degrees and upwards. Is this warm enough for them?

The temperature named, though just sufficient, is by no means too high for these plants, and they enjoy a gentle bottom heat. But what they want to make them bloom is an occasional rest. Remove them to a cooler house, or reduce the temperature somewhat, for two or three months, keeping them on the dry side at the roots (but not too much so). Then bring them into the warm house again, plunging the pots in a moderate hotbed, if possible; give plenty of water, and syringe overhead frequently, and they will soon push up freely. When the flowers are over, rest them again, and so on. These plants are of an evergreen nature, never dying down completely, if healthy.

Heat Essential.

Can I keep Eucharis amazonica in a large pot through the winter? I have no glass, only a frame. Would it bloom next year without heat?

This is essentially a tropical or stove plant, and it does very little good, as a rule, under cool treatment. If the bulbs are kept dry through the winter (in the pot) they would probably survive until spring, but they would hardly be likely to flower without heat.

Starting the Bulbs.

I have recently potted six bulbs in a 9-in. pot, and have plunged the pot in a bed of Cocoanut fibre, with a 4-in. hot-water pipe running through it. How much fibre should be between the pipes and the bottom of the pot?

Personally, we prefer to start the bulbs singly in small sizes, and pot them on as they grow—still, the method described will give good results if the bulbs are not overwatered at first. The bottom of the pots may be within three or four inches of the hot-water pipe.

Suitable Soil.

What is the best soil to use for Eucharis Lilies; and how deep should the bulbs be planted?

A good loam, with a little leaf-mould and sand, is the best soil for these plants. They usually do best with the bulbs about halfway out of the soil; but as they grow they will push up to a certain extent.

When to Repot.

How often should *Eucharis Lilies* be repotted?

These plants do not need repotting at all frequently, as they bloom best when the pots are crammed with roots and bulbs. It should not be done oftener than once in three or four years.

EVENING PRIMROSES.**Prolonging the Flowering Period.**

Can anything be done to prolong the flowering period of Evening Primroses?

This may be accomplished by going over the plants, and carefully removing the seed vessels as they form. The older growth may also be cut hard back, which will induce many young flowering-shoots to take their place.

Raising from Seed.

Please tell me how to raise Evening Primroses from seed. Is heat required?

No artificial heat is necessary for raising these plants. Sow the seed in April, preferably where they can remain; and when up thin them out to two or three feet apart.

Rockery Varieties.

Is the Evening Primrose, occasionally recommended for rockeries, the ordinary garden variety?

There are many varieties of this plant, some of which are especially suitable for rockeries. One of the finest is *Oenothera caespitosa*, which bears large, deliciously fragrant white flowers. It is a perennial, and grows to a height of six or eight inches. An annual variety, *O. rosea mexicana*, is very choice. It bears bright rose-coloured blossoms, but is only half-hardy. It is about three inches high. Other varieties may be had, bearing yellow and blush-pink flowers.

Roots as Food.

Are the roots of the Evening Primrose edible, or valuable as food? If so, how are they cooked?

Yes; the roots of this plant are not only quite wholesome, but very nourishing. On the Continent they are used as a remedy for consumption and similar diseases. They should be boiled till tender, and served either plain or with melted butter, etc.

Winter Treatment.

Please tell me the proper name of the Evening Primrose, and how to care for it during winter?

The botanical name of the Evening Primrose is *Oenothera biennis*, but there is a much finer form of the same thing, known as *O. Lamarckiana*. Both are perfectly hardy biennials, and require no care or protection during the winter.

EVERLASTING PEAS.**Cultural Directions.**

Can you give information as to the culture of *Lathyrus latifolius* (Everlasting Pea)?

The culture of the plant is exceedingly simple, the roots only needing to be planted in deeply trenched and well-manured ground, and beyond giving a mulch of littersy manure in the summer, and an occasional soaking during drought, to be let alone.

Distance Apart.

I have sown some seeds of Everlasting Peas, to climb up a wall. How far apart should they be? How many plants would be sufficient to make a show around a bay window?

These should be thinned out (or transplanted) to about eighteen inches or two feet apart. Three or four plants will be quite sufficient for a bay window.

Methods of Propagation.

How are Everlasting Peas propagated? Can they be obtained in any other manner than by sowing seed?

These plants may be increased by division of the roots, or by seed. Seedlings do not flower until the third or fourth year.

Raising from Seed.

When should seed of Everlasting Peas be sown?

Seed can be sown in March or April, in pans of light, rich soil, in a cold frame. It may also be done in August or September. In favourable localities the seedlings may be planted out in sunny borders as soon as they are strong enough; but otherwise they had better be wintered in a cold frame. It is well to soak the seed in tepid water for some hours before sowing.

Suitable Aspect.

Will Everlasting Peas thrive and grow in a shady place?

These plants will grow all right in a moderately shaded spot, but they will not bloom so freely as if they were more fully exposed to the sun. A west aspect is very suitable.

Transplanting.

Can I move a large Everlasting Pea in autumn, or would it be better moved in the spring?

This would be much better done in the spring.

Unsatisfactory Plant.

An Everlasting Pea, planted in a tub, at the base of south wall, looks yellowish and dry, in spite of plenty of attention as to water. Is the position unsuitable?

This plant seldom does much good in a tub, and it had better be planted out in a sunny border—the aspect is all right.

FERNS.**Adiantums (Maidenhair).****Leaves Turning Brown.**

Some Maidenhair Ferns last year turned brown, and were cut down in the autumn. New shoots now appear, but fail to attain any size, as they turn brown and wither away immediately. The Ferns are potted in turfy loam. Should they be repotted with fibrous peat, and are they likely to thrive on the staging of a sunny greenhouse?

It is not usual to cut these Ferns down until the spring, but if the fronds were dead it would not matter. The old soil is, doubtless, spent and sour, and the plants should be repotted at once. They will do just as well in nice, fibrous loam, leaf-mould, and sand, as in peat. There is no reason why they should not thrive in a sunny greenhouse, but they like a little shade all the same.

Mildew on Plants.

I have a small collection of *Adiantum* Ferns, which at present (May) are in a temperature of fifty to sixty degrees. The greenhouse does not receive any sunshine until late in the day. Most of the plants are attacked with mildew, the disease affecting old fronds. I water with a rose, and sometimes with a spout can. The house is very moist. Is there anything wrong with my methods of cultivation?

At the season named, stove Ferns ought to have a rather higher temperature than that stated, fifty-five to sixty degrees at night being the minimum. In a shady house, unless a genial temperature is maintained, mildew is very likely to be troublesome, owing to the stuffy atmosphere. To get rid of it, cut off all the affected parts, as far as possible, and dust the plants with sulphur. Keep them quite clean, and water cautiously.

Overhead Sprinkling.

Is it good to water Maidenhair Ferns overhead, or should the foliage be kept dry?

This Fern likes to be gently dewed overhead on bright days, especially when coming into and making its growth.

Repotting.

When is the proper time to repot Maidenhair Ferns?

The best time is just as they are beginning to grow again, after having been rested and cut down in the winter.

Small Plants Failing.

My small Maidenhair Ferns do not make any progress. They are in a temperature of from fifty to sixty degrees, and are kept on the wet side, but as fast as the young fronds come up they seem to rot. Can you tell me why?

These plants should do much better in the temperature named; perhaps you are giving too much water, which causes the fronds to decay. They do not need very much moisture until growth is well on the way. If they do not improve, water them a couple of times with a weak solution of nitrate of soda (half an ounce to the gallon), or else shake them out and repot.

Suitable Soil.

I shall be glad to know what is the right soil to repot Ferns (Maidenhair and other ordinary greenhouse kinds)?

Peat is often employed for this purpose, and is necessary for some varieties, but those you name will succeed quite well in a mixture of fibrous loam, leaf-mould (about half the quantity), and some sand, with free drainage.

Winter Treatment.

What treatment should be given to Maidenhair and other Ferns in a cold greenhouse in winter? Should they be cut down, and kept quite dry?

These plants should be kept dry, and all the fronds left on until just before they begin to make new ones.

Davallias.

Cutting-down Hare's-foot.

When should Hare's-foot Ferns be cut down?

Cut them down towards the end of the winter, or when the fronds die off.

General Treatment of Japanese Fern Ball.

I have a Japanese Fern ball, and would like to know the best way to grow it, and what sort of soil I should use.

The Fern balls (*Davallia bullata*) do not require any soil; just hang them

up in a fairly warm greenhouse, syringe them well, and once or twice a week soak them in a pail of tepid water for half an hour.

Late Starting.

Please tell me the proper treatment for a Japanese Fern Ball. I started it at the end of May by soaking in water for three hours, and kept it in a shady position indoors, but the fronds all died off after reaching a length of one and a-half inches or so. I now have it outdoors in a shady spot, but the dying-off process still continues. I water twice a week.

The fault probably rested more with the "Fern ball" itself than with the treatment. They require to be procured and started early in the season—when newly imported—then they usually do well. But when they have been lying about for several weeks or months in a dry warehouse or shop they naturally lose much of their vitality, and then either do not start at all, or only very weakly and reluctantly.

Propagating Hare's-foot.

A Hare's-foot Fern has been accidentally knocked down, breaking off nearly all the "feet," which overhung the pot. Can I propagate the pieces broken off? Each seems to have a few fibrous roots near the place at which it has been severed.

If the pieces are not too short, and especially if there are a few roots at their bases, they will probably "strike"; insert them carefully round the sides of a well-drained pot, filled with very sandy loam and leaf-mould, and stand the pot on ashes in a glass-covered box, shaded and kept moist.

Repotting.

I have a Hare's-foot Fern growing in a 7-in. pot; it is now pot-bound. Will you inform me how to propagate it, and when to do it?

The plant should be increased by means of division—take off any small pieces, each with a few roots, and place them in small pots of sandy soil, keeping them close and moist until established, when they may be moved on into larger pots. This should be done in the spring. The Hare's-foot Fern requires only ordinary culture, and being evergreen should never be allowed to become really dry, even during the winter.

Starting Fern Balls.

Will you tell me the correct time to start some Japanese Fern balls growing again? Would it do if I mixed some guano with the water I soak them in? I have no greenhouse, but hang them in a window.

In a warm and sunny room they may be started early in March. See that the halls are not too dry, or the creeping rhizomes may perish. Soak them in tepid water for a short time before hanging them up in the window, and sprinkle them overhead occasionally. A little guano or nitrate of soda dissolved in the water in which the plants are dipped forms an excellent stimulant, but do not use it until growth commences.

General Culture.

Cutting-down.

When will be the best time to cut down Ferns, as the roots are full of new fronds?

Do not cut down any Ferns of an evergreen nature, or with green fronds—merely remove any dead or fading leaves; but such deciduous kinds as *Adiantum cuneatum* should be cut right down directly the new fronds begin to push up.

Dividing Roots.

How shall I divide ordinary Fern roots, and when is the best time to do so? They have been in the garden five or six years.

Take up the roots, and either pull or cut them apart, into pieces, with

two or three good crowns apiece, planting these singly. The beginning of April is the best time for the operation, before the growth extends too far.

Insects on Fronds.

Last year my Ferns were infested with a small green and brownish fly, which served them badly. I cut down the old fronds; and now the young fronds appear, some of them are covered with the fly, as last year. Could I get an insecticide with which to syringe them, as this would be more convenient than smoking, the room being a large one?

The insects are doubtless aphides of some kind. As the place cannot be fumigated, the best alternative is to dip the plants overhead in a liquid insecticide. Hold the plants inverted, on the fingers of one hand, and dip them just to the rim of the pots. This is better than syringing, as we do not want the stuff to get into the soil; but vapourising is much better still.

Propagation.

Which is the better way to propagate Ferns—by sowing seed, or division?

Seedling Ferns undoubtedly make the best plants, but raising them is a delicate and tedious process, which requires a little experience to ensure success. In a small way, it is generally more convenient to divide them.

Raising from Spores.

Could you tell me how to propagate seedlings from the spores of Ferns?

Fertile fronds should be taken just as the first spore cases begin to open. Put in a paper, and place in a dry place for a day or so, and the spores will fall out. Sow them thinly in pots filled with loam and powdered crocks. Place them where the sun does not come on them, but where there is plenty of light. If stood in saucers of water, no surface watering will be necessary. Prick off as soon as the prothalia (the green lichen-like seedlings) have covered the surface of the pots.

Reducing Roots when Repotting.

When repotting a Fern, and before placing the plant in its new pot, is it possible to take off some of the roots without risk to the plant? If I repot my Ferns as they are at present, I must employ pots which will encroach overmuch upon my limited greenhouse space.

It is not usual to reduce the roots of Ferns when repotting them, though if they are to be placed in the same sized, or only slightly larger, pots, it may be done to a moderate extent.

Rockery Failure.

I made a small rockery in my garden last spring, and planted some Ferns. After coming up in good style, they began to turn quite brown and dead-looking in the fronds. I mixed a large quantity of coal ashes with the soil, as it was very heavy. Can you let me know what to do to prevent a recurrence of this failure?

The cause of the Ferns failing must be attributed to the coal ashes, which were either too fresh, or were used too freely. Sand of some kind would have been better. Early next spring, before the new growth commences, take them all up, remove as much as possible of the existing soil, and replace it with a mixture of good loam, leaf-mould, and road or other sand; then replant the Ferns.

Standing Pots in Water.

Is it better to stand pots of Ferns in water, or to give moisture in the usual way?

It is very bad practice to allow the pots to stand in water. This is only suitable for semi-aquatic plants. Water in the usual way; and syringe overhead occasionally in hot or bright weather.

Watering.

Is there any special way of watering Ferns?

Ferns should be watered in the same manner as other plants, *i.e.*, wait until the soil is nearly dry, and then give a full supply; but when in active growth they must never want for moisture.

Greenhouse and Stove.***Allosorus crispus.***

Would a block of slate, broken into small pieces, and mixed with loam and leaf-mould, suit this Fern?

The slate may be used, but the *Allosorus* will grow well in ordinary loamy soil, with sand added. Leaf-mould also may be used.

Annual Repotting Necessary.

Will you tell me if Ferns, kept in rooms and a cold greenhouse, should be repotted every year, and, if so, when?

Ferns certainly ought to be repotted every year. This may be done in a well-heated house in February; but in a cool one, March, or the early part of April, would be better.

Bird's-nest Fern.

Will you tell me the botanical name of the Bird's-nest Fern, and whether it requires any special treatment?

The botanical name of the Fern is *Asplenium nidus-avis*. To do well, it requires rather more warmth than that of an ordinary greenhouse, and must be freely supplied with water, and shaded from hot sun. If repotting is necessary, it should be done in the spring.

Habit of *Pteris Ouvrardi*.

Will you kindly give me a notion of what *Pteris Ouvrardi* is like, and the height to which it attains?

Pteris Ouvrardi is a large form of *P. cretica*, and may be grown from one to one and a half feet high. It is one of the most popular crested Ferns we have.

***Pteris argyrea* in Winter.**

Does the Silver-leaf Ribbon Fern die down in winter?

It is evergreen, but, of course, makes very little growth during the winter, and then requires rather less water.

Selection for Rockery.

I have a small conservatory, with an aquarium fixed at one end, and a rockery overhead, and hollows left for Ferns. Can you give me a selection?

Almost any Fern with a fairly dwarf habit of growth looks well on rock-work. Some of the *Pteris* are very useful, *P. albo-lineata* being a gem for an elevated position, and *P. cretica*, *P. serrulata*, and *P. argyrea* in rather lower places. *Adiantum cuneatum* and others are also very suitable, and some of the *Blechnums* are beautifully coloured in the young state, if you have sufficient heat for them. Plant in the spring.

Silver-leaf Ribbon Fern.

Is the Silver-leaf Ribbon Fern sufficiently hardy to exist in an ordinary sitting-room all the year round?

With ordinary care this Fern—the correct name of which is *Pteris argyrea*—will thrive in this situation, provided that no gas is burned there. It should be watered as often as the soil becomes moderately dry.

Stag's-horn Fern.

I have a Stag's-horn Fern, which I am told grows on the trunks of trees in Australia. Unfortunately, I have no trees in my garden. Can you suggest how I could keep it through the winter?

Even if there were trees in your garden, this plant could not be grown on them, in the open air, as all the *Platyceriums* are tender subjects, and

most of them require the heat of a stove, though the common kind (*P. alci-corne*) may be grown in a greenhouse, or the window of a warm room. They are usually grown in well-drained pots. It must be properly potted in good peat, sand, etc.; you had better get a nurseryman to do this, and also to keep the plant in a greenhouse until the spring, when it may be removed to a window.

Unhealthy Foliage.

What is the cause of Ribbon Ferns growing with narrow, sickly-coloured leaves, and many of them brown at the tips? They are in a cold greenhouse, facing east, and shaded with tiffany.

There is something wrong at the root of these plants—either the soil is unsuitable or “sour,” or the drainage insufficient. Repot them in the spring, in fresh loam, leaf-mould, and sand, and, in the meantime, do not give too much water.

Varieties for Exhibition.

Which do you consider the three best varieties of Ferns for cool greenhouse, and for an amateur to grow for exhibition.

Pteris tremula, one of the numerous forms of *P. cretica*, and the common Maidenhair (*Adiantum cuneatum*)—if you can manage it—otherwise, grow *Asplenium bulbiferum*.

Yellowish Leaves.

I have two Ferns in hanging baskets in the greenhouse. They are going yellow, or, at least, a very bad green. Could it be too much sun? I immersed these Ferns on a very hot day in a rain-water tub for half an hour, but I imagine that would not do harm.

Exposure to the sun always causes the fronds of Ferns to become more or less pale in colour, or yellowish—they should have a little shade. Perhaps the plants get too much water; it is a bad plan to soak them, unless very dry, and far better to water in the ordinary way.

Hardy Ferns.

Foliage for Bouquets.

Please tell me what hardy Ferns I could procure for mingling with cut flowers?

Three of the best Ferns for this purpose are the Black Maidenhair Spleenwort (*Asplenium adiantum nigrum*—this is the “French Fern” of the florists), the Lady Fern (*Athyrium filix-fœmina*), and the Hard Fern (*Blechnum spicant*).

Instructions for Potting.

Should the soil for hardy Ferns be put in the pots fairly loosely, or be made very firm?

Ferns should be potted fairly firm, but not too much so; a few sharp raps on the bench, and the pressure of the fingers (or thumbs) round the sides of the pots, chiefly just inside the rims, will suffice.

Plants for Shady Border.

I have a small border under a wall, which is always shaded, and have grown the common wild Ferns there, but they do not give satisfaction. Can you suggest some good, strong varieties, similar to the ordinary, and tell me how to prepare the ground for them?

There are several British Ferns which would do well in the position named. We would recommend *Lastrea pseudo-mas*, *Lastrea filix-mas*, and *Polystichum angulare*, *Scolopendrium vulgare*, or any of the varieties from these. The ground should be dug deeply, and before doing so a good dressing of leaf-mould would be beneficial. The planting may be done at any time in early spring.

Selection for Light Soil.

Can you name some hardy Ferns suitable for light soil? Could I raise them from seed in an unheated greenhouse?

Any of the common hardy Ferns, such as the Male and Lady Ferns (*Aspidium*), the Hart's-tongue (*Scolopendrium*), the Shield Ferns (*Polystichum*), and others, would do well in a light soil, if kept moist. You would find raising from seed a slow process.

Substitute for Maidenhair.

Can you tell me one or two good hardy Ferns for using for buttonholes, instead of Maidenhair Ferns?

There is no Fern that exactly takes the place of the Maidenhair, though you may try *Asplenium adiantum nigrum*, which is similar to the French Fern, and quite hardy.

Transplanting.

When will be the best time to shift Ferns in a border? I wish to alter their position, and to well trench the borders before replanting, so they will have to be out of the ground for about a week.

The right time for this operation is in March, when the new growth is just on the point of commencing. The plants should be laid in "by the heels" in some sheltered spot while the work is progressing—do not attempt it during very cold or frosty weather.

FICUS (India-rubber Plant).**An Unhealthy Plant.**

An India-rubber plant was repotted two years ago. The leaves are now drooping, and it seems to be withering up. What course shall I pursue with it?

A careful inspection of the roots is necessary to determine what is best to be done. Turn the plant out of the pot, and if the soil and roots are very dry give more water; if too wet, but the roots fairly healthy, give less water, while if these are much decayed or unhealthy the plant must be shaken out entirely, and all decayed roots be cut away; then repot it in a compost of fresh loam, peat, and sand, using a rather small pot, and keeping it warm and close until growing again.

Bottom Leaves Falling.

Can I do anything for an India-rubber plant which is dropping all its bottom leaves?

Large or old plants of this *Ficus* usually lose some of their lower leaves in autumn—though an evergreen subject, the leaves are not everlasting, and after a time must fade and die off. Keep the soil in an evenly and moderately moist condition, and the plant in a fairly warm place, free from draughts; also sponge the leaves frequently with tepid water. If very bare, you might take off and strike the top of the plant, and thus obtain a prettier specimen.

Leaf Sheath.

I have recently purchased an India-rubber plant, which shows a long red spike on the top of the stem; is that the flower?

The red spike at the top of the plant is not the flower, but the sheath of the next new leaf, which will fall when the latter expands.

Overgrown Plant.

My plants of *Ficus elastica* have grown too big for the greenhouse. Could I propagate them, and, if so, how? They have each only one straight stem.

If you have a good hotbed, take off the tops of the plants, and insert

them in small pots of sandy soil as cuttings; otherwise, nick the stems near the top, and fix a split pot, filled with sandy soil, round each. This work should be done early in spring.

Seed Failing to Germinate.

I have tried to raise India-rubber seeds in three kinds of soil—leaf-mould, old Mushroom-bed soil, and a mixture of loam, leaf-mould, and Mushroom-bed soil—with a good bottom heat, but all seem to have rotted off.

The proper soil for this purpose is peat, to which plenty of sand should be added. No manure is necessary. With a good bottom heat the seed ought to germinate, but, of course, this depends upon whether it is sufficiently fresh or not.

Stem Rooting.

I have an India-rubber plant which has shed its leaves from the lower part of the stem, and am trying to re-root it, with a flower-pot for that purpose, higher up the stem. Should the plant be given water in both the upper and lower pots, or not?

These plants are usually increased by means of cuttings, not by stem-rooting, and we are doubtful of the result, though you may succeed, with care. The stem of the plant should have been notched or tongued before putting on the split pot. Water the lower pot in the usual way, so as to keep the plant in health and vigour, and keep the soil in the upper pot just moist—no more.

Striking Cuttings.

I have an India-rubber plant which has two small shoots growing from the main stem; can these be easily propagated?

These young shoots, or laterals, may be treated as cuttings, and rooted. The best time to take them off is early in the year—January to March—cutting each, with a sharp knife, close to the main stem, so as to secure what is termed a “heel.” Take off the lowest leaf, if of any size, and then insert each cutting very firmly, and rather deeply, in a deep 3-in. pot of very light and sandy soil, such as a mixture of equal parts of loam, leaf-soil (or peat) and sand, with good drainage. Tie the stem to a neat stick, water in well, and plunge the pots in a brisk hotbed, at seventy to eighty degrees, keeping close, moist, and shaded till rooted. If you cannot manage this, you could get a nurseryman to strike them for you.

Treatment after Repotting.

I have an India-rubber plant which I repotted from an 8-in. pot into a 12-in. one. It is now losing all its lower leaves, which are turning yellow and falling off. What can I do to prevent or cure this?

It is undoubtedly the repotting that has caused the leaves to fall as described, though, of course, they are certain to mature and fall sooner or later. You do not say when you repotted the plant—if in the autumn or winter, this was decidedly wrong; the proper time for repotting is in April, or in a cool house early in May. Nothing can be done, but water should be given sparingly until the roots have occupied the fresh soil.

Winter Treatment.

How should an India-rubber plant be treated as regards water in winter, and should it have any manure at that season?

During the winter the plant should be watered only as often as the soil in the pot becomes moderately but not too dry, and the pot rings slightly hollow when rapped sharply. Do not give the plant manure, but use tepid water, and sponge the leaves gently once a week with the same.

FORGET-ME-NOTS.

Culture for Winter Flowering.

Could I grow Forget-me-nots in boxes in a greenhouse, to flower during the winter and early spring? If so, please tell me how to proceed.

Forget-me-nots (*Myosotis*) would probably bloom to some extent in an unheated greenhouse in the winter and early spring. Sow the seed in spring, and, when the little plants can be handled, prick them out into the boxes, and keep them duly watered and attended to, in some lightly-shaded place out of doors. House them in October, placing the boxes on shelves, if possible.

Dividing Plants.

I trimmed up some Forget-me-nots after flowering, and they look as if they would divide up nicely. Can this be done, and, if so, when?

Yes; they may be divided, but better plants can be had by sowing seed annually. Divisions may be made during the autumn.

Filling a Window-box.

I have a window-box in an exposed situation, which I wish to fill with Forget-me-nots. Should I put the plants in the box in autumn, or wait until the spring?

It would be much better to get these plants in place in the autumn, as they flower very early.

Free-flowering Variety.

Can you tell me the name of the prolifically-flowering Forget-me-not, used for spring bedding? I find three or four different kinds mentioned in seed catalogues—the one I mean is a sheet of blue when in bloom, and sows itself freely.

This is probably *Myosotis dissitiflora*, one of the earliest to bloom, and very free-flowering, of a rich blue colour. Sow the seed in June.

Treatment after Flowering.

Will you tell me how to treat Forget-me-nots when they have finished flowering, in order to preserve them for next spring?

The usual method is to pull the old plants into rather small pieces, and plant them out four or five inches apart in a reserve bed, whence they are lifted in the early autumn, and placed where they are to flower. They must be duly supplied with water until established.

FREESIAS.

Culture of Seedlings.

How shall I treat Freesias, for them to flower in a greenhouse next winter? I have raised a good many from seed this summer, but do not know whether to keep them under glass, and give water, or to put them outside to ripen.

As soon as the growth is completed, the bulbs must be dried off and rested, either out of doors, in the full sun, or, better still, on a sunny shelf in the greenhouse. In September, place about six bulbs in a 5-in. pot, and put them in a cold frame, or at the foot of a south wall, but do not cover them in any way, except with a mat or the like, until the new growth appears. Bring them into the greenhouse before frost.

Failure in a Vase.

Can you tell me what has been wrong with my Freesias? I planted twelve bulbs in a vase with sand, charcoal, and fibre, in September, and left it in a dark place to root. Three weeks later, as they had pale, sickly-looking shoots, about three inches long, I brought it into the light.

Since then they have gone on growing, till now some of the leaves are nearly forty inches long. There has been no sign of flowers. Will it be any good to keep the bulbs for another year?

In the first place, the compost used was far too light—Freesias like a good, loamy compost, with only a little leaf-mould and sand. Secondly, the vase should not have been placed in the dark, but have been exposed to the full light throughout—a cold frame is the best place during the early stages. Then, if the roots were kept soaking in water, as usual under the vase system, the failure is accounted for at once. These plants succeed better when grown in pots. The bulbs will be of no use for next season.

Greenhouse Treatment.

Can Freesias be grown successfully in an unheated conservatory? I am told they should be potted in July.

It is quite possible to manage these in an unheated house, but actual frost should be excluded by some means, if possible. It is not necessary to pot the tubers in July, except for very early flowering—August or September will do quite well—and for a cool house it is not advisable to get the plants too forward.

Incorrect Starting.

I potted some Freesias in October, kept them in the dark for a week or two, and then brought them into an ordinary room, but they seem to have run all away, and have produced no bloom-spikes. Can you suggest a cause?

The pots containing these bulbs should not have been placed in the dark, but in a light, cool frame, or something of the kind, until the growth was well advanced and the flower-spikes beginning to show. Perhaps the room is too warm and close, and the atmosphere too dry—a greenhouse shelf is the best place.

Need of Warmth.

I have several Freesias, which have grown to six inches in a cool, lean-to conservatory. I wanted them in bloom by Christmas, but they are turning yellow, and I cannot tell the cause. Will you please instruct me what to do?

These plants are suffering from want of warmth. Plants of this nature need a genial temperature, in order to grow and bloom well so early; a night temperature of fifty or fifty-five degrees is necessary to keep them coming on freely.

Offsets Grown-on.

How are the young offshoots of Freesias grown-on so as to make large corms?

The small corms may be grown-on in boxes or pans of suitable soil, or in a bed of light material in a sheltered spot out of doors.

Outdoor Planting.

Can Freesias be planted in the open, and are they successful?

The bulbs of this subject may be planted in a bed of light, deep, sandy soil, at the foot of a south wall, placing them about two inches deep, and covering with dry litter or Fern until the growth is well up.

Treatment after Blooming.

What is the proper treatment of Freesias after blooming (in pots)?

When the flowers are over, put the plants on a sunny shelf in the greenhouse, and as the foliage fades give less and less water. When quite died down, keep them perfectly dry, and still in the same place, till about August, when the pots should be turned out, and the best of the bulbs repotted in fresh soil, placing the pots in a cold frame or pit, but do not bury them up in any way.

Unripened Bulbs.

I planted a quantity of Freesias, five to seven in a "forty-eight" pot. The blades have grown a foot high, but there are no bloom-stems, nor do I see the appearance of any. Can you tell what is the cause of it? They were potted rather loosely in sandy mould.

The probability is that the majority of the bulbs were too small, or not sufficiently ripened, to flower well. If not thoroughly ripened by being well roasted in the sun after flowering, Freesias will not bloom to any extent. The loose potting would scarcely be the cause, though they ought to be planted fairly firm.

FUCHSIAS.

A Point in Repotting.

When lifting Fuchsias from the beds, in order to repot them, should the soil be shaken from the roots?

If the soil is of fairly good quality, a little should be kept round the roots when lifting.

Blooms Dropping.

Why is it the blooms of some Fuchsias drop, and others keep on?

The usual cause of Fuchsias dropping their buds is that there is something wrong, or not quite right, at the roots. Either the soil is unsuitable, or has become sour; the drainage is defective; or too much or too little water is given. A healthy plant does not drop its buds—it is due to some error in cultivation. The soil should become partly dry at times, and, if the plants are pot-bound, try the effect of a little weak liquid manure. Fuchsias delight in being frequently sprinkled overhead, and should have a light shade from hot sun.

Early Blooming.

Is it possible to get Fuchsias into bloom as early as May?

Some varieties naturally bloom earlier than others. To get them in bloom early, the plants should be started in January or February, in a warm house, and be kept growing-on steadily with plenty of moisture. It cannot be done in a cool house.

Forming a Standard.

Will you tell me the method of forming standard Fuchsias, so as to form a plant about four feet high?

Cuttings, consisting of stout shoots of any strong-growing variety, should be inserted in a gentle heat in the spring. When rooted, pot them singly, and grow them on as rapidly and vigorously as possible, keeping each strictly to a single stem, all sideshoots being removed. Pot them on as required, always keeping them growing on freely, and when the desired height has been attained, pinch out the top of each plant. This will cause the top buds to break laterally, when from three to five of the best shoots should be retained and stopped beyond the third or four pair of leaves, stopping them again and again, beyond the third joint, until a sufficiently dense head has been obtained. Should it be found impossible to get both stem and head in one season, keep the plants over till the next.

Fruit from Fuchsias.

Are all Fuchsia fruits edible?

The fruits of all the species and varieties of the Fuchsia are wholesome, if not very palatable; they are greedily eaten by birds, game, etc.

Fuchsias by the Sea.

What are the Fuchsias one sees in gardens at seaside places? They are in large bushes, sometimes ten feet high. Would they grow in a clay soil, facing south?

The varieties chiefly seen growing by the seaside are the well-known *F. gracilis* and *F. corallina*, but other good kinds are *F. globosa* and *F. Riccartoni*. It is doubtful whether they would ever attain the dimensions inland that they do by the sea, as, owing to the mild climate, the plants do not get cut down by frost to any extent in the winter, and, consequently, make growth from the old wood. Those named will live and grow anywhere.

Fuchsia fulgens in Winter.

Please give me winter treatment for *Fuchsia fulgens*—does it require the same attention as ordinary Fuchsias?

This fine old species should be partly dried off for the winter, and stored in any cool place, but take care that the temperature does not become too low, as it is rather tender.

Greenhouse Treatment in Winter

I have some prize Fuchsias, which I should like to keep through the winter. I have a greenhouse and a forcing house. Should I be doing right by keeping them in the latter?

If frost is excluded from the greenhouse, Fuchsias may be wintered there with perfect safety. There is no necessity to keep them in a forcing house—this term implies a regular temperature of sixty to seventy degrees, or more—over the winter, unless, perhaps, the plants are small, and it is desired to bloom them early.

Overfeeding.

My Fuchsias have plenty of growth, but, in most cases, no blooms. The plants were potted in April or May, in virgin loam, sand, and leaf-mould. I water with clear water, manure-water, and fertiliser. Is the treatment right?

You have fed your plants too well. Discontinue the liquid manure and fertiliser until the buds appear.

Plunging Pots.

Will Fuchsias plunged in pots in the border bloom equally as well as if turned out of the pots, or is it best to turn them out, and repot in the autumn?

The plants may certainly be plunged in the pots, and if a dwarf habit of growth is desired this may prove the better plan, but great care must be taken that they do not want for water at the root, or the leaves will fall and the plants go wrong. If left alone and allowed to root out, both over the rims and through the drainage holes, they will grow, in time, much as if planted out. On the whole, the safest and least troublesome method is to plant them out in the ordinary way, and take up and repot them in the autumn.

Raising from Seed.

I am anxious to grow a good show of Fuchsias in pots from seeds. I have no greenhouse, but a warm summer house. What soil should I procure? State best varieties.

Fuchsias can certainly be raised from seed, but it is doubtful if they would succeed in a summer house, unless very light and warm. The seed must be sown in the early spring, in a gentle hotbed or warm house. The best soil is a mixture of about three parts of fresh loam to two parts of leaf-mould, with some sand, and a little decayed manure for large plants. The only seed procurable is "mixed," as a rule—named kinds must be grown from cuttings.

Shy Bloomer.

I have a fine bushy Fuchsia named Cloth of Gold, with variegated foliage; it is nearly three feet high, and quite healthy, but has never bloomed yet. Is this a non-blooming variety, please?

This old-fashioned variety is a very shy bloomer indeed; we have known it to flower, but very seldom.

Soil for Potting.

What is the best soil to use when potting Fuchsias?

Any light, loamy soil, with a little leaf-mould or well-decayed manure, will suit Fuchsias.

Taking Cuttings.

How and when should cuttings of Fuchsia be taken?

Cuttings of the Fuchsia may be taken at any time up to the middle or end of September, placing them in pots or boxes of sandy soil, and keeping them close and just moist in a frame or glass-covered box.

Thinning-out Shoots.

Should the new growth of Fuchsias be thinned out if very thick, and the shoots cross. How many should be left on a young plant in a 5-in. pot?

If at all crowded, the shoots should certainly be thinned out, as then those left will bloom better. Four or five are enough for a young plant in a 5-in. pot, as a rule.

Training a Pyramid.

I have a Fuchsia from a cutting. It is five feet high, and perfectly straight. Kindly instruct me how to train it as a pyramid.

Without cutting this plant right down, which seems a pity, it is doubtful if you will succeed in making a pyramid of it now. It ought to have been stopped when about a foot high, training the laterals out horizontally, and taking one shoot up vertically, this being again stopped after making a certain amount of growth, and the process repeated until the desired form is obtained.

Treatment of a Cut-down Plant.

I have a Fuchsia, which I have recently cut down. The new growth is about half an inch long. I am keeping it in shade, and not giving any water. Is this correct?

Place this in a position where it gets all the light possible, and be careful not to over-water; until it has made more growth, it will want but very little.

Watering in Winter.

My Fuchsias have bloomed well all the summer, and I now want them to rest, so have put them in a cold room. Some of them are young plants. How often will they want water?

If the plants are in pots or boxes, they will only need water as often as the soil becomes moderately dry; but if allowed to remain dry too long, the plants may shrivel and die. Young plants require much the same treatment, but keep the soil almost constantly moist, if possible.

When to Cut-back.

I have a young Fuchsia just coming into bloom; should it be cut back after flowering, or in the spring?

Cut this plant back in the spring, when it begins to grow again.

When to Repot.

When is the best time to repot Fuchsias which have been in an outhouse all the winter?

This should be done in March, or early in April.

Winter Blooming.

I have a collection of good Fuchsias that I should like to carry through the winter. I have heated and cool greenhouses. How shall I proceed?

Fuchsias can be kept growing and flowering in a genial temperature all through the autumn, and part, if not the whole, of the winter, while a few are at their best at that time. All that is necessary is to continue watering as usual, with a little liquid manure. They will do well in a cool house until cold weather sets in, when they should be removed to a warmer one.

Winter Treatment.

I had a lot of Fuchsias in the garden this summer, which I took up and potted in the autumn. I laid them on the floor of a potting-shed, and covered them with straw, with dry leaves on the top, as this is the only means I have of storing them. Have I done right, or will they start growing? The roots have not been watered since they were put under the straw.

Unless very severe weather sets in, the plants will be quite safe even if the shed is unheated. In mild periods they may shoot a little, but if this does not go too far it will do no harm. You have chiefly to guard against the plants becoming very dry at the roots, when the wood will shrivel and perish. Examine them occasionally, and give a good watering, if necessary.

GAILLARDIAS.**Cutting-down after Blooming.**

I have some Gaillardias that have bloomed well, and wish to remove them. Shall I put them in pots in a cold frame, and should they be cut down?

The roots of these plants may be kept in pots over the winter. The dead or spent stems should be cut out.

Methods of Propagation.

Is it necessary to grow Gaillardias from seed, or is it possible to take cuttings from the old plant, and winter the same in a cold frame?

Cuttings may be taken, or the plants may be divided in the spring. As a rule, seedlings make better plants.

Seedlings Failing.

In the spring I sowed some Gaillardia seeds in a cold frame. The plants have been very poor—one long stem, with only a small flower at the end. What can I do next year to obtain more satisfactory results?

It is not of much use attempting to raise plants of this sort in a cold frame, if you want them to flower to any extent the same year. You should sow the seeds in a frame over a gentle hotbed, and draft the plants off into the cold frame after they have been pricked off. If this cannot be done, sow the seeds in the open ground, or in boxes, in June or July, winter the plants in the frames, and plant out in the spring.

When to Sow.

Would July be a suitable time of year for sowing Gaillardia seeds?

Gaillardias sown at this time will bloom early and well next season, but the plants should be wintered under glass.

Wintering Old Plants.

I generally lose my Gaillardias in the winter, and new ones planted in the spring bloom too late to be of much use. What is the best way to secure them?

These plants are fairly hardy, and, where the soil is light and well drained, usually survive the winter, though they are apt to die off on a cold clay or wet staple. If you cannot winter the old plants, take some cuttings, in boxes, in August, or sow some seed in July, and keep the plants in the frame over the winter, planting out in the spring. Keep dry, and mat up well in severe weather.

GARDENIAS.

Blossoms Deformed.

I have a Gardenia in a stove, which looks very healthy, and had a nice lot of buds on, but these are deformed. Could you kindly give me the reason? The house is kept at sixty degrees by night.

The plant must have experienced a check of some kind. Such an experience is not at all uncommon with these plants, and can only be prevented by careful culture. Is the plant sufficiently supplied with moisture and nourishment at the roots?

Cultural Directions.

Please tell me the best way to succeed with Gardenias—the soil and temperature required?

Gardenias succeed best in a light, peaty soil, with a good proportion of sand, and free drainage also. Winter, or resting, temperature, fifty to fifty-five degrees, with a range of sixty-five to eighty-five degrees during the spring and early summer, while in growth and bloom, with abundance of atmospheric moisture, shade from hot sun, and a fair amount of water and liquid manure at the root.

Failure to Bloom.

I have some Gardenias which I cannot get to bloom. They are potted in suitable soil, and kept in a temperature ranging from fifty-five to sixty-five degrees, and never less than forty-five degrees in very cold weather.

If fairly healthy and vigorous, these plants seldom fail to bloom more or less well; perhaps you do not get the wood sufficiently ripened in the autumn. When once started, they must be grown on vigorously.

Insufficient Warmth.

My Gardenia house goes down to forty-eight degrees at night, and up to sixty-two in the day. Ought I to syringe the plants every day, and, if so, what time, and ought the paths and walls to be damped down; also, how often ought the plants to be watered?

The night temperature named is very low for Gardenias coming on—it ought to be quite ten degrees higher. The plants should certainly be syringed on all fine or warm days, but chiefly in the forepart of the day; do not wet them too much towards night, especially with so low a temperature.

Pots or Border?

Is it advisable to plant out Gardenias in a border in the greenhouse, or should they be kept in pots?

Gardenias may be treated either way, but pot culture is preferable.

Stove Treatment Necessary.

Is it possible to grow Gardenias out of doors in a southern aspect during the summer months?

During the summer they may be grown without artificial heat, but they are what are termed stove plants, and can only be flowered successfully where they have heat and are exposed to the sun.

GAZANIAS.

Best Aspect.

I have some plants of *Gazania splendens*, and am very pleased with the handsome blossoms. I have now potted them. What do they require—sun, shade, heat, or air?

Gazanias are not by any means difficult to grow. Although the flower is certainly handsome, their shyness of blooming is their chief defect.

They succeed best with plenty of sun and air and a warm position; they make good window or basket plants.

How Propagated.

Can *Gazania splendens* be raised from seed?

This plant is usually raised from cuttings, but it may also be grown from seed, which almost any first-class seedsman will supply.

Protection Needed.

Can I safely leave plants of *Gazania splendens* outdoors through the winter?

These plants will perish if left out all the winter. They should be kept in a house where the frost does not penetrate.

Striking Cuttings.

How and when should I take cuttings of *Gazania splendens*?

Cuttings may be taken in early spring. They will root readily under glass, in light, sandy soil.

Suitability for Hot, Dry Border.

The soil of my garden is very light and sandy. Would *Gazanias* make effective plants for borders very hot and dry in summer?

The *Gazania* is one of the best plants for a hot, dry position, and is very gay in fine weather, but, unfortunately, it only opens its blossoms when the sun shines.

GENISTAS.

Cutting-back after Blooming.

What shall I do with a *Cytisus* (*Genista*) when it has finished flowering?

When this plant goes out of bloom, it should be rested a little; then cut back more or less according to whether they are desired to increase in size or not; and be repotted when fairly in growth again.

General Culture.

I reared a *Genista Andreana* from seed; it is now a foot high, with numerous lateral branches. Should these be stopped, to make it more bushy? It is in a cold house, shaded from sun in hot weather. Some of the leaves are turning brown. Can you assign a cause for this?

It is natural for this plant to lose its leaves. It should be fully exposed to the sun, and will do better out of doors, but may be taken indoors in very severe weather, if grown in pots. In the ground, on light soil, it is quite hardy. We should not recommend stopping. As the plant has been shaded, the wood will be soft, so stand out in the open, to ripen off, but do not let it get too dry in the pot. Take it in before very severe weather, for plants in pots may suffer where those in the ground will be unharmed.

Plants not Blooming.

Last year I raised *Genistas* from seed; they grew well, strong, and robust, and nearly three feet high, but not a flower appeared. Do not seedling *Genistas* bloom the first year?

When raised from seed these plants do not bloom to any extent the first year or two, but grow them on to the third or fourth year, and they will be grand.

Raising from Seed.

Please let me know how to raise *Genista Andreana* from seed?

Sow the seed in the spring in a box of sandy loam, in a cool frame, or on a sheltered border of fine, light soil; when two or three inches high, transplant to a well-worked bed in the open air, at a foot or so apart.

Syringing.

I have three *Genista fragrans* in the house, and three in a conservatory. The latter have been syringed with rain-water, and have not done nearly so well as the former. Would the syringing have been bad for them?

The plants in the conservatory ought to have done better than the others—they like a moderate amount of syringing, but, of course, the syringe should be kept off them when in bloom.

Treatment for Forcing.

I have plants of *Cytisus Andreanus* and *C. albus*—which have flowered nicely in 6-in. pots in the greenhouse. Will they require special treatment to get them to flower next year in a cold house?

The plants should be repotted as soon as they have finished flowering, placing them in pots two or three inches larger, and using good, light, loamy soil. Encourage a vigorous growth during the early part of the season, and ripen this well by standing the plants in a very sunny spot towards the autumn, with rather sparing supplies of water at the roots. They will then flower profusely in a cold house next season.

GENTIANAS.**Culture of Gentians.**

Could I succeed with *Gentianellas* (*Gentiana acaulis*) in a light brown-coloured loam, over a subsoil of oolitic limestone. Would they succeed planted on a rockery?

Any of these plants ought to succeed admirably under the conditions described. They do well on rockwork, and thrive in either sun or light shade, but prefer a moderate amount of sun.

Gentians not Flowering.

I have had, for two or three years, plants of *Gentians*, which appear healthy, but do not flower, and remain exactly in the same stage, without increasing at all. Can you tell me what is wrong? The plants are in a rockery, among others which are all doing well.

This plant is frequently a considerable time in becoming established and making any progress, but, no doubt, those referred to will make a start presently—that is, provided the soil is suitable, and they get enough moisture. The effect of a light surfacing of fine leaf-mould in the spring might be tried. Take care that they do not become too dry at any time. Plants of this kind seldom succeed well in the neighbourhood of large towns.

Position for *Gentiana lutea*.

I have a seedling of *Gentiana lutea*, which grows to the height of three feet. Should it have a southern position when planting out?

This fine plant succeeds best in a position where it is about half shaded, getting the sun for part of the day, but being shaded for the remainder, or where there is the light, flickering shade of trees at a little distance.

Seed not Germinating.

Two months ago (in March) I sowed some seed of *Gentiana acaulis* and kept the pot close in a warm room. I have never allowed the soil to get dry. How soon might I expect the seed to germinate?

This would have been better in a cool frame than a warm room—it is quite hardy. There is no saying when the seed will germinate now—it is usually sown as soon as it is ripe, when it comes up freely.

Treatment of *Gentiana acaulis*.

Could you give me some hints as to the best treatment of *Gentiana acaulis*? Is the spring or autumn the best time for planting?

This beautiful subject prefers a rather stiff or retentive loamy soil to any

others, though we have had it doing well on quite a light staple, but this must be made firm. A little shade will do no harm, but a position fully exposed to the sun is best. Do not let the plants become dried up, nor yet overwater them. Plant in the spring.

GLADIOLI.

Corms Deteriorating.

Are the bulbs of Gladioli reckoned to deteriorate after the first year? Some that I saved from last year have not flowered so well this.

The old bulbs, or corms, of these plants invariably die away annually (in much the same way as Potatoes), but one or more new bulbs are formed on the top, or at the side of, the old ones, and these should produce the flowers the next year. Whether they do so or not depends chiefly upon the soil—in some suitable formations the bulbs grow and increase, while in others they deteriorate more or less rapidly. They should be allowed to ripen properly before lifting.

Cutting the Foliage.

In November I wanted to take Gladioli bulbs up, and as the foliage still remained in its green state, I cut it off to within an inch of each bulb. Have I ruined them so that they will not flower again?

It is quite right to cut off the tops of Gladioli if they do not die off within a few weeks of flowering, or, say, by the beginning of November. Keep them dry and replant them in March or April.

Depth for Potting.

At what depth should bulbs of Gladioli *The Bride* be potted, for early blooming indoors?

The bulbs should be just covered—no more.

Difference in Varieties.

Please explain the distinction between Gladioli *Gandavensis* and *Lemoine's* hybrids?

Gladiolus Gandavensis is an original species, with rich scarlet blossoms, but a large number of seedling or hybrid forms have been raised from this, of many beautiful colours—these are known as *G. Gandavensis* hybrids. *Gladiolus Lemoinei* (*Nanceianus*) has been obtained by crossing *G. Saundersi* and *G. Gandavensis*; these varieties are very vigorous in growth, with large and handsome blossoms.

Distance Apart.

How far apart should Gladioli be planted, and would they succeed in a shaded border?

The bulbs may be planted about a foot apart, or, if a very rich effect is desired, nine or ten inches. They will bloom in a partially shaded border, but not so well as in the sun.

Early Flowering.

Can I safely pot Gladioli in December, and plant them out in spring, to secure early blooms?

The only kinds that can be potted at the time you mention are the early-flowering varieties—such as *The Bride*, etc.—for forcing. The others require a rest, and it would do them no good to start them so soon.

Frame Culture.

I purpose growing a number of *Gladiolus Gandavensis* in a frame. Is it advisable to place manure at the bottom, and what should the mould be composed of?

Any good, light, loamy soil will do. It will be as well to place, say, a 3-in. layer of cold, flaky, hotbed manure (not fresh) in the bottom, some

two or three inches below the bulbs. But why not grow them in 5-in. or 6-in. pots, which can be taken anywhere when in bloom?

Gladioli Failing.

I planted some Gladioli in a sunny border, and good, loamy soil, but not a plant appeared above ground last year. I omitted to put a little silver sand in with each corm. Did that cause the failure?

Either the bulbs were planted too deeply, or else they were unsound, or they would certainly have grown; there are few more reliable or easily-managed plants than these. Sand is only really necessary where the soil is naturally damp or heavy. The proper depth to plant is between four and five inches.

Period of Growth.

How long do Gladioli take to flower, reckoning from the time of planting? I want mine to bloom at the end of August and during September.

About five months, or a little more in a cold, wet season. To flower in August, plant early in March, or else start the bulbs in pots (5-in.), and plant out when they have made some amount of growth, and the weather is more propitious.

Planting Delayed.

I wish to plant some Gladioli in a bed now filled with spring flowers. Can the Gladioli wait till the latter are over, or could they be started in a box and planted out?

This depends upon how long the spring-flowering plants are likely to be. The Gladioli will do no harm until, say, the middle of April, but much later would give them no chance of flowering well. If you do not care to sacrifice them the best plan will be to pot the Gladioli singly, and start them in a frame, planting them out when in growth. This is better than boxes.

Pot Culture.

Can Gladioli be satisfactorily grown in pots, like spring-flowering bulbs? If so, what is the treatment?

Gladioli of almost any kind succeed capitally in pots, and, with ordinary care, often bloom better than in the open ground. Pot the bulbs in March, in 5-in. or 6-in. sizes, using light, rich, loamy soil, and keep them cool and dry (in a frame or pit) until well in growth, when more water should be given, with some liquid manure when the flower-spikes begin to appear.

Raising from Seed.

I have some Gladioli spikes full of seed-pods. Will they be of any use, and, if so, how must I treat them?

Shake out the seed when ripe, dry it well, store in a dry place, and sow it in the spring in boxes of light, sandy soil. Grow the plants on for two or three years, lifting the bulbs each autumn, and replanting them in the spring, and in due time they will bloom.

Replanting Necessary.

Four years ago I planted some Gladioli outdoors. They come up every year, and look exceedingly well, but never flower. Ought I to have taken them up and replanted them?

They should be taken up in the autumn, dried, and stored where they can be kept free from frost and damp. Well manure the ground, and dig it deeply; replant in March.

Selection for Pot Culture.

Can you recommend two or three good Gladioli suitable for pots in an unheated greenhouse?

Good Gladioli for pot culture are *G. Brenchleyensis*, any of the numerous

varieties of *G. Gandavensis*, and the early-flowering *G. Colvillei*. Plant early in spring.

Separating the Corms.

Should *Gladiolus* bulbs be separated when lifted in the autumn, and planted out singly in the spring, or be replanted as lifted?

The bulbs should be separated, sorted out into sizes, and in the spring be planted again, the larger ones where they are to flower, and the smaller in a bed by themselves, to grow on.

Size of Pots.

I want a few *Gladiolus* in the greenhouse for the summer. What size pots should they have? Should they come in the greenhouse as soon as planted, or be left outside first, till rooted?

Pot the bulbs in 5-in. or 6-in. sizes, according to the size of the bulbs, using any light, rich, loamy soil. The best place for them until they are well in growth, and showing for bloom, is a cold pit, or frame, where the lights can be drawn right off them in fine weather.

Treatment after Flowering.

I have a number of *Gladioli* in pots and boxes. What shall I do with them when they finish flowering?

Leave them out until the foliage is dead or dying, then shake out the bulbs, and store them in a frost-proof place for the winter.

When to Plant.

When is the best time to plant the American hybrid *Gladioli*?

These are almost, if not quite, hardy, and may be planted at any time during the spring, from February till the end of March, or later.

GLOXINIAS.

Best Bulbs for Blooming.

Can good results be obtained from *Gloxinia* bulbs after the first year's blooming?

Bulbs about two years old produce the finest blossoms, but *Gloxinias* may be grown with good results up to the third or fourth year. After that the bulbs become too large, and the flowers grow small, so that it is better to employ young bulbs.

Cultural Directions.

I have some bulbs of *Gloxinias* which were raised from seed last year. When should these be planted, and in what soil? I want to rear them in a conservatory heated to about sixty degrees.

If you can command a steady temperature of about sixty degrees, the bulbs may be potted and started at any time now (February). Place them singly in pots of about twice their diameter, at first, using a light compost of loam, leaf-mould, peat (or Cocoanut fibre), and sand, with good drainage, and only just covering the crowns of the tubers. When well in growth, move them into 5-in. or 6-in. pots (according to size, etc.), and keep them near the glass, with shade from hot or bright sun. Give water sparingly at first, but more freely when the plants are in full growth and coming into bloom.

Depth to Pot.

I recently moved some *Gloxinia* seedlings into 5-in. pots; in many cases I notice the bulbs are forming on the top of the soil. Is this correct, or should I cover them?

The crowns of the bulbs of these plants should be covered with about

half an inch of soil; spread a little more compost over them—just enough to cover them.

Falling Buds.

Early in June I had some Gloxinias given me, very healthy-looking, and in full bloom. When the first blooms fell, buds formed, but did not make perfect flowers, and most of them fell off before opening. Now the plants look very sickly, and one has died. The conservatory is not heated. I have kept them nicely moistened, not wet. Can you give me any advice upon the matter?

Although they can usually be managed fairly well in an unheated house during the summer months, these plants really belong to the stove. Your plants were doubtless raised in a warm house, and, when removed to a cool conservatory, "went off," quite naturally—it is not your fault. Had the weather been warmer they would have done better, but that of June and July was, on the whole, cold and dull.

Foliage Dying Down.

My Gloxinias died down some weeks ago. They are in a cool conservatory, at about fifty degrees of heat. Should they be watered at all?

These plants will require little or no water, but do not let the soil become so dry as to cause the bulbs to shrivel. Do not let them go much below the temperature named, or they are liable to perish.

Germination of Seed.

What is the usual time Gloxinia seed takes to come up, and is sixty to seventy degrees the proper heat to give?

In a genial temperature fresh seed ought to "show" in ten days' or a fortnight's time. The temperature named is sufficient, but a bottom heat of five degrees to ten degrees higher is beneficial. If not placed in a propagating case, the pots should be covered with glass.

Keeping through Winter.

If I dry off my Gloxinias, knock them partly out of the soil, pack in boxes, and keep in a warm room, will they be safe, as I have not room in my greenhouse?

If thoroughly dried, and then put into dry soil, they may keep well in a warm room; but it is not safe to place them where the temperature falls much below fifty degrees Fahr. It will be better to use pots or pans to keep them in. Fungus is always liable to spread when wood is used.

Overhead Watering.

Is it beneficial to Gloxinias to water them overhead?

Where a constantly moist atmosphere is maintained by frequently damping down the walls, floors, etc., it is scarcely necessary to water Gloxinias overhead; but, if desired, it may be done with good results.

Points in Exhibition Blooms.

What are the chief points in a Gloxinia bloom for show—is there a preference as to the number of petals on each bloom, and, if so, which is best—one with five, six, or seven petals?

The chief points in a good Gloxinia bloom are form, colouring, and size. The proper or normal number of petals is five, so that those with six or seven are a kind of monstrosity—still, a good, well-shaped flower with six petals would be quite suitable.

Procuring Seed.

Do Gloxinias require to be artificially fertilised? When is the seed ripe for gathering?

If seed is the object, the blossoms should certainly be fertilised by hand.

It is fit to gather when the pods begin to turn brown and split across the top. It should be well dried after gathering.

Raising Seedlings without Heat.

Is it possible to raise Gloxinias from seed in an unheated greenhouse? If so, when and how should I sow them?

This is difficult and almost impossible, the only way being to sow the seed in June, and get plants with small bulbs by the autumn. These must be wintered, in the soil, in a kitchen cupboard or other fairly warm place, and be brought into the greenhouse again in May or early June, starting, potting, and growing them on quickly, when they will bloom towards the autumn.

Size of Pots.

I have had some fine corms of Gloxinias given to me; they are now growing well in various sized pots. Shall I repot them into larger pots?

This depends to some extent on the size of the corms, and also upon the size of the pots they occupy. As a rule, a nice one or two-year-old Gloxinia may be grown in a 5-in. or 6-in. pot, while nothing is gained by using pots more than seven or eight inches across, even for old bulbs. If the plants need a shift, give it them, but it does not pay to overpot these plants, and it should never be done after the flower buds appear.

Starting the Bulbs.

I have potted some Gloxinias in a mixture of peat, leaf-mould, and sand, and stood them in a temperature of about seventy degrees, with a sheet of glass covering each pot. How long do they take to start? The mixture was moist when I potted the tubers, so that, I suppose, I need not water it until the growth shows.

If sound, the bulbs will not be long starting in this temperature. Do not keep them too moist, or they may decay; nor yet keep the glass on too closely.

Suitable Manures.

What is the best manure for Gloxinias; some are two-year-old bulbs, others last year's seedlings. They are coming on slowly into bloom, but need something to nourish the plant and bring out the brilliancy of the flower.

Use ordinary liquid manure—that made from sheep's or partly-dried horse-droppings is the best—but do not give it too strong, of the colour of weak tea only, and not more than once or twice a week. Or a little of some good fertiliser may be sprinkled on the surface of the soil, and lightly pricked and watered in, about once a week. Half a small teaspoonful will be enough for a 5-in. or 6-in. pot.

Treatment of Seedlings.

I have raised several Gloxinias from seed this year, and some have flowered. The plants are small, but healthy. How should I treat these later on?

As the weather becomes colder the foliage of these plants will die away, and they should be gradually dried off until quite at rest, when the bulbs may be either kept in the pots, or shaken out and stored in Cocoanut fibre for the winter.

Unhealthy Plants.

I have had a fine batch of Gloxinias, but several of the leaves have gone off as if scorched or diseased. They are also somewhat soft or flimsy in texture. Can you tell the remedy?

The flimsy condition of the leaves denotes an error in culture. They are either grown in too high a temperature and close atmosphere, in heavy shade, or too far from the glass. The scorched appearance is caused by

the fungoid disease known as rust. Dust all the affected plants at once with a mixture of quicklime and sulphur, getting it well on the under-side of the leaves, and wherever the disease appears. Let the plants have moderate ventilation, with shade from hot sun only, and not too much moisture.

Vitality of Seed.

I have just saved some seed of *Gloxinias*, but cannot conveniently sow it yet. Will it keep for any length of time?

There is no necessity to sow this seed at once. It will keep for a year or so.

When to Manure.

Is it necessary to give manure of any sort to *Gloxinias*? If so, when should it be done?

When the pots are well filled with roots, and the flower-buds beginning to rise, a moderate quantity of a fertiliser or some liquid manure may be given, but not before.

GYPSOPHILA.

Culture.

Please tell me the best treatment for *Gypsophila*, and also the best kind to grow for putting with cut flowers and for decorations?

The elegant *G. paniculata* is a hardy perennial of the simplest culture, and only requires planting in fairly good garden soil, and to be watered well in dry weather to succeed quite well. It is best planted in the spring, or it may be raised from seed, which, sown in early summer, make nice little plants for next season. But the annual *Gypsophila elegans* (*G. e. alba* is the best form) is also very useful, and is easily and quickly raised from seed sown in the spring.

Gypsophilas Dying.

Can you tell me the reason of my plants of *Gypsophila paniculata* dying? They were large, well-established plants, and had bloomed well for three summers. About two to three feet down we come to a layer of white and yellow clay, and I have thought that the perennial *Gypsophila*, being a very deep rooter, may have struck this with disastrous results.

These have probably succumbed from old age, or exhaustion, and should be replaced by vigorous young plants. The clayey subsoil would not affect them injuriously to any extent, though what this elegant plant chiefly delights in is old lime, or chalk, so that unless lime is already abundant in the soil, plenty of old mortar or lime-rubbish should be worked in the soil before planting.

Pinching-out the Tops.

My *Gypsophila paniculata* plants in boxes have run up rather lanky, but are fairly strong plants; if I pinched the tops out, will it make them bushy, or will it do harm?

Pinch out the tops by all means; it will do them good.

Propagating Double Varieties.

How and when should a double *Gypsophila* be propagated?

This is done by means of cuttings; those of the young wood being inserted, in heat, in the spring, and of the older growth in the early autumn.

Wintering Outdoors.

I have a nice, bushy plant of *Gypsophila paniculata*, which has not flowered this season. Can I leave it out for the winter?

This plant is quite hardy, and may safely be left out as you suggest.

HEATHS (*Erica*).

Culture of Pot Plants.

Please tell me the proper treatment for flowering Heaths. At present they are in the bay window of sitting-room, but I have a greenhouse with medium heat.

The chief point in the successful culture of the Heaths (*Ericas*) is the watering. They must never be allowed to become really dry at the root, and yet no water should be given until the soil attains a moderately dry condition. This is best ascertained by tapping the pot with one of the knuckles. After flowering, keep the plants rather on the dry side, and then cut them back moderately, removing all the weak spray. After this still keep on the dry side, but syringe the plants overhead frequently in bright weather. When growing again, repot, using the best peat and sand, rammed quite firm in the pots, with good drainage. They only require cool greenhouse treatment.

Cutting Wild Heather.

Does wild Heather require cutting occasionally, and, if so, how often, and to what extent?

Yes, this subject ought to be cut-back every few years—there is no exact period—and more or less according to the size of the bushes.

Propagation.

I have a large bush of Mediterranean Heather, from which I want to take some cuttings. I have tried, but cannot get them to strike. Can you tell me how to propagate them?

To propagate this Heath (*Erica mediterranea*) take cuttings of the growing tops, or sideshoots, about two inches long, trim off the lower leaves with a fine pair of scissors, and then insert them closely in extra well-drained pots filled with very sandy peat (fine), and surfaced with half an inch of pure silver sand. The soil must be made very firm round the cuttings, and a good watering be given with a fine rose. Plunge the pots in a gentle hotbed, or stand them on ashes in a warm house, and keep them close, shaded, and moderately moist till rooted. Or a few of the lower branches may be layered into sandy soil in the autumn.

Suitable Soils.

Will wild Heather grow readily in suburban gardens? When should it be planted, and what is the best soil?

This should be planted in the autumn, but it will be found rather difficult to establish and persuade to grow, especially near a large town. The best soil is good, sandy peat; or a light, free loam, such as that from a common or moor, with some sand, will do well.

Transplanting.

I have a border of the small American Heather, overrun with Wicken-Grass, which cannot be removed except by digging up both together. What method would you advise to replant the Heather?

Any of the hardy Heaths, or *Ericas*, may be transplanted either in the autumn, in October or November, or in the early spring. If the locality is very cold or exposed, the latter would be preferable, but the plants must be regularly watered afterwards if dry weather succeeds. Take the plants up carefully, remove every scrap of the roots of the grass, but leaving as much soil on the Heaths as possible, and replant at once. Drain the border freely, and make the soil quite firm about the roots of the plants.

White Heather.

I am expecting a plant of White Heather; should it be planted in full sunshine, or in a shady, moist place?

This should be planted in proper soil, in a very open and sunny position, away from any shade or shelter. It will need considerable care.

HELIOTROPES.

How to Propagate.

Please tell me how and when to propagate Heliotropes to produce nice little plants for summer bedding?

For bedding purposes—and to produce pot plants as well—Heliotropes are propagated by means of cuttings of the young shoots in the spring. The old or stock plants should be brought into a moderate warmth at about the turn of the year, and occasionally syringed overhead on fine days. As soon as the young shoots are about two inches long, they should be taken off, each with a slight heel, trimmed, and inserted rather closely in pots or boxes of light, very sandy soil. If kept regularly moist, close, and shaded from sun, they will soon form roots in a moderate hotbed or warm house, and must then be potted off.

Heliotrope as a Bedder.

Would Heliotrope make a good bedder, and what would mix with it to relieve it?

Yes, this plant makes a capital bedder, but requires a fairly light, rich soil, and a warm situation. The best plants to contrast with it are those with white foliage, and those with soft pink flowers.

Heliotropes as Dot Plants.

I want to grow some Heliotropes as dot plants. To do this, should they be stopped at all?

If the plants run up tall they may be stopped, but otherwise it is hardly necessary. It is advisable to procure the dwarfier growers.

Taking Cuttings.

Can I take Heliotrope cuttings, and keep them in a cold frame during winter?

Heliotropes can only be kept where warmth can be given during the winter. Few plants are so easily damaged by frost.

Treatment for Heliotropes.

My Heliotropes do not get on at all well. They are in a nice, sunny greenhouse, and are potted in light, sandy soil, which I water whenever it seems necessary. Other plants grow nicely. Is special treatment required for the Heliotropes?

The only way to make these plants grow is to limit the ventilation, keeping the house always at a genial temperature, and sprinkling them frequently overhead. As this will probably not suit the other plants, you had better obtain a sufficiently deep box, placing some ashes in the bottom, stand the pots on this, and cover, not too closely, with a square or two of glass. The ashes must be kept constantly moist, and, as the plants grow, gradually tilt and remove the glass. Perhaps the soil is too light and sandy, or the roots are not sufficiently moistened. This should be attended to.

Wintering Heliotropes.

I have some strong, healthy plants of Heliotrope from seed sown this spring. Will they stand the winter out of doors? If not, how should they be treated? I have a large, cold greenhouse

These plants are really rather more tender than the majority of bedding plants, and require a temperature of not less than forty-five degrees, to bring them through the winter safely. They may pull through in the cold house, if the winter is mild, but it depends to a great extent upon the weather.

HOLLY.

Failure to "Berry."

My Holly trees never "berry." Some are kept trimmed, others are not cut. Could you give any reasons, and suggest a remedy?

Several of the numerous forms of the Holly do not produce any berries, or very few; it is chiefly the common native kind that berries so freely. If they are not of the right variety, nothing can be done to make them fruit freely—they must be replaced.

Growth Dormant.

Would you tell me what I can do in the case of Holly trees which I moved in February? The old leaves have all died, and no new buds have grown, but the wood is quite green.

All that can be done is to leave the plants alone—they will break into growth in their own good time.

Raising from Seed.

I wish to make a hedge of Hollies. I can get plenty of berries. Would you kindly give me a few hints as to the way of growing them?

The berries are in mature condition about Christmas-time. Gather them, and put in a heap, with some damp sand, in a shed or elsewhere, for the winter. In March rub the seeds out between the hands, and sow, sand and all, in shallow drills in the open, transplanting the seedlings subsequently, as required. It will take several years to obtain plants of any size in this way, the Holly being notoriously slow in growth.

Transplanting.

I want to remove some Holly trees into a different position. When would be the best time to do so?

Towards the end of October, or early in November.

Unhealthy Trees.

My Hollies are fine, tall trees. They are trimmed every year, but for the last two years they have not put out new leaf well, and in parts begin to look quite thin. We live in the suburbs of a large town.

Hollies are not, as a rule, good town plants, and when situated in the suburbs of a large city, as the smoke-laden area extends they succeed less and less well, until in the end they often become perfect eyesores, and have to be destroyed. Still, this may not be so in your case. Try the effect of a mulch of good, half-decayed manure round each tree, as far as the roots (or branches) extend, and throwing several pails of water (or, preferably, of liquid manure) on this occasionally in dry weather. Fertilisers containing plenty of potash are also very useful in the culture of the Holly, so that wood-ashes, burnt earth, the products of a "smother" fire, or a little saltpetre occasionally would be very useful.

When to Prune.

I have some Holly trees which require to be cut back. When is the best time of the year to do this?

Hollies (and other evergreen trees or shrubs) are best cut back in the spring or early summer—April to June.

HOLLYHOCKS.

Hollyhock Disease.

Some Hollyhocks are each season attacked by disease; first the leaves get yellow spots on them, then turn brown, and are perforated. I think the blossoms suffer also. Can anything be done to prevent this?

This unsightly and destructive affection is the well-known Hollyhock disease (*Puccinea malvacearum*). The best preventive is good cultivation—namely, to put the plants out in deeply-worked and well-manured soil, and

give them plenty of water, and a mulch of manure over the roots if possible, in dry weather. Should it appear, however, the worst of the leaves should be cut off and burnt, and the rest dusted well with lime and sulphur. The lime should be fresh. If these points are observed, there will be very little trouble from this cause. Plants from division or cuttings are more liable to be attacked than seedlings.

Propagating Choice Varieties.

I have a good strain of double Hollyhocks; will you please tell me how to propagate from the old stools in autumn?

Insert some of the smaller, short-jointed shoots from the base of the plants, in small pots of sandy soil, plunging them in a hotbed, and keeping rather close till rooted. Cuttings with a slight "heel," or with two or three incipient roots, should be preferred. When rooted, remove the plants to a cool frame or pit, and ventilate freely in all mild weather. Otherwise, you may leave the plants alone until the early part of next April, then planting every rooted bit out separately. Another and still better way would be to save seed from the best of the plants, and sow it. The seedlings will come nearly or quite equal to the parent plants.

Raising from Seed.

When is the proper time to plant Hollyhocks? Which is the best way to raise them?

If sown early in the summer, the plants may be put in place in the early autumn—October; if sown in the early autumn, they should be wintered in frames, and planted out in the early spring; if raised in heat from seed sown early in the year, they must go out in April or May. Plants raised from seed are much to be preferred to any others.

Replanting Small Seedlings.

I have some very young Hollyhocks in wrong positions. When would be the time for changing them into their flowering places?

If the seedlings are very small, they had better be left alone until the spring, removing them in March or early April.

Several Stems.

I have a lot of Hollyhocks, which have thrown up four and five stems from one stool. Shall I let them grow on, or cut any of the stems off? I should like to have good blooms this year?

If the plants are healthy and strong, and are, moreover, growing in a deep and rich soil, leave them alone, but do not allow more than five spikes on any one root. If you can give them an occasional soaking—once or twice a week—with liquid manure of some kind, especially if the weather continues hot and dry, and a mulch of littersy manure round each plant, this will help to increase the size and beauty of the flowers and spikes.

Transplanting to Flowering Quarters.

At the end of May, I sowed Hollyhocks in boxes, afterwards transplanting them into a bed. Shall I be doing right in transplanting them, in September, to the places where I want them to bloom next year?

Yes; if the plants are fairly large and strong, they may be safely put out into the positions in which they are to flower. They are perfectly hardy where the soil is fairly light and well drained.

HONEYSUCKLES.

Aphis Infestation.

I have a very nice Honeysuckle which, last year, got covered so thickly with fly that I had to destroy all the blooms. As it is commencing to shoot, I should like to know if I could do anything now, or a little later, to prevent a failure this year

There is nothing else but an insecticide of some kind in a case like this. Dust the trusses or foliage well with tobacco powder, on the first appearance of the insects, and, if this does not check them, syringe the plant repeatedly, if necessary, with an infusion of quassia and soft soap, or one of the advertised insecticides, which can hardly fail to destroy the insects.

Blooms Absent.

The shoots of a Honeysuckle are about four feet long; it has never flowered since it was planted two years ago; the soil seems to be suitable, and it has plenty of manure. Does it require pruning?

If the plant has made new growths of the length mentioned, these had better be left intact, as they should flower profusely in due course. All that need be done is to cut away any old or worn-out growths that have already flowered. Although the soil should be good, do not give too much manure, which only promotes a rank and flowerless growth.

Cultural Hints.

A Honeysuckle planted last spring under a bay window, with south aspect, seems to be thriving. Please tell me how to water and manure it?

In such a position as this a Honeysuckle should have a good soaking with water (or liquid manure) occasionally in dry weather. A light mulch of littersy manure over the roots would also be very beneficial during the summer—if the appearance is objected to, just cover it with a little soil or cocoanut fibre. The Honeysuckle rather loves moisture and shade, but with a fairly moist and rich root-run thrives well on a sunny aspect.

French Honeysuckle.

I have some French Honeysuckle, raised from seed sown in the spring, with five or six leaves, which have all grown from the base; they are growing singly in 4-in. or 5-in. pots. Will you tell me when to plant them out of doors, and at what distance apart?

This pretty plant, of which the botanical name is *Hedysarum coronarium*, is a hardy biennial, and the plants you have will consequently flower next summer, and then (probably) die. The plants may be put out where they are to flower in September, or early in October, but do not let them become starved in the pots. They should be placed about three feet apart, as they grow about four feet high (they are not climbers), and the flowers are bright red or scarlet.

Japanese Variety too Rampant.

I have an arch, with Roses and Japanese Honeysuckle. The latter has grown so luxuriantly that it is smothering the Roses. I would like to know how to prune it.

This is an exceedingly rampant subject, and if planted in good soil it frequently smothers everything else near it. Pruning is of little avail, except for the time, and only renders the growth more vigorous than before, and, unfortunately, it very seldom flowers to any extent. It is, in fact, not a fit subject to be planted along with Roses of any kind. The common Honeysuckle is quite a different thing.

Quick-growing Varieties.

Which is the whitest, freest bloomer, and quickest-growing Honeysuckle?

Either the Dutch Honeysuckle or (*Lonicera*) *brachypoda* will suit your purpose, both being of free and rapid growth, and bearing their pale yellow or whitish blossoms in great profusion.

Straggling Growth.

When and how should a Honeysuckle be pruned? I have one which is very straggly, and I should like to make it flower lower down on the stem.

As a rule, these plants require very little pruning, but, as yours is so straggling, it may be cut down in the spring.

Striking Cuttings.

Having a very nice Honeysuckle in my garden, I should like to know how to strike some of it.

Take cuttings of the sideshoots, six or eight inches long, and each with a "heel," in the autumn, and insert them on a sheltered, shady border of sandy soil, making this firm. If healthy, they will root readily.

Suitability for Town Gardens.

Is it worth while attempting to grow Honeysuckle in a town garden (although in a fairly open part)?

Yes; in good soil and a suitable position, some of the Honeysuckles ought to succeed well in a fairly open town garden. There are several good varieties, but Scarlet Trumpet is one of the best.

Varieties for a North Aspect.

I wish to cover two garden arches with flowering or ornamental creepers. These get very little sun, face the north, and the soil is clayey and cold. What plants are suitable?

You will find Honeysuckles succeed here better than almost anything else; the Scarlet Trumpet and (*Lonicera*) *periclymenum belgica* and *serotina* are some of the best kinds. The ground must be well worked up and manured; plant high.

When to Plant.

When, and in what soil, should I plant a Honeysuckle?

Plant in autumn, or in early spring, in any good, loamy soil, to which has been added a little well-decayed manure.

HOYAS.

Cause of Failure.

I have a Wax-plant (*Hoya carnosa*), which has not made much headway. It is in a shaded greenhouse, in a 9-in. pot, and fairly good soil. Is my treatment at fault in any way?

The cause of this plant failing to flower is the shade of the house—it is a sun-loving subject, and should be exposed almost fully to the rays of the sun. In shade, it may grow, but will not flower to any extent.

General Treatment.

Can you tell me the soil and treatment required for *Hoya carnosa*?

Hoya carnosa (the Wax-flower) succeeds best in a light, porous compost of loam, leaf-soil, peat, and crushed mortar or lime rubbish, in nearly equal parts, with some sand if the loam is at all heavy. Free drainage should be provided, and the soil be made quite firm. The roots should be kept almost dry through the winter, and any temperature down to forty degrees will be safe—in fact, the cooler the plant is kept the better, provided that frost is well excluded. During the summer, an intermediate (or cool) stove temperature, of sixty-five to eighty degrees, should be afforded, if possible, with plenty of moisture, both at the root and overhead.

Parasites on Stem.

Will you inform me what parasites affect the *Hoya carnosa*? A plant in the conservatory has light brown spots, slightly raised, on the main stems. What is the treatment?

Your plant has been attacked by the brown scale (*Coccus*); the worst of the insects must be gently scraped off, and the stems then washed with a strong infusion of soft soap, with a little sulphur or a few drops of paraffin added.

Propagation.

What is the best way to propagate the Hoya?

The Hoya strikes readily in the spring, from cuttings formed of the side-shoots or tips, inserted in pots of very sandy soil, and plunged in a hotbed. Keep them close, moist, and shaded.

Pruning Unnecessary.

When should a Hoya be pruned?

This plant does not require much pruning, as a rule, until it becomes overgrown, when any old, worn-out wood should be cut away, and the young shoots thinned out.

When to Repot.

I have a Hoya japonica which has outgrown its pot, and I thought of putting it into a small barrel or tub. When is the best time to do this?

If in a warm house, the plant may be moved into the tub in February, but with only a cool greenhouse temperature it would be as well to defer it until March or April.

HYACINTHS.**Bulbs Grown in Cocoanut Fibre.**

Should Hyacinths grown in Cocoanut fibre be put in dry, and continue without any water during the time they are in the dark cupboard?

The Cocoanut fibre should be in a moist condition when the bulbs are put in, and must be kept constantly moist, or the bulbs will not form roots in it. Bulbs grown in this material need not be kept in the dark, like those in glasses, as the light is already excluded.

Crooked Flower Spikes.

How can Hyacinth flowers be prevented growing crooked? When issuing from the bulb, instead of coming out perfectly straight, they grow sideways.

This may be due to the soil having been made too firm below the bulb, which becomes tilted a little to the side, and hence the flower-spike is not thrown vertically. The only thing that can be done is to place a slight stick, or a length of stout wire, to each plant, with a tie, and so train it to an upright position.

Culture in Glasses.

Kindly give a few particulars on growing Hyacinths in water, especially as to height of water when forming roots?

When the Hyacinths are first put into the glasses, the water should just touch the base of the bulb, but after the roots have started it will not be necessary to keep the glasses quite so full. A little charcoal in the water will help to keep it sweet. If the water gets clouded or sour, it may be emptied out, and fresh rain-water substituted. The glasses should be stood in a cupboard, or any dark place, and remain there until the bulbs have made good roots, and have commenced to grow, when they should be brought gradually to the light.

Cutting Bulbs for Propagation.

Would it be possible to propagate Roman Hyacinths which have been out of doors for one season, by cutting the bulbs across, or scooping them out, so as to get them to bloom the next season?

Leave the bulbs alone, or lift and replant in the autumn. Cutting them or scooping them out will not make them bloom, and propagation by this means is a long and tedious process, requiring great experience.

Exhausted Bulbs.

Are the bulbs of Roman Hyacinths any use for potting again the following season, after having done very well this?

As a rule, these do not do much good the second season. You may plant them closely in boxes in the autumn, and bring them on quietly for cutting in the spring, or they may be planted out, after flowering, in a sheltered bed of light soil. To give them the best chance, keep them supplied with water, and a little liquid manure, if possible, until the foliage begins to fade, and then gradually dry them off.

Forcing Dutch Bulbs.

I want to have some Dutch Hyacinths in bloom by Christmas. When shall I get the bulbs potted, and what temperature will they require?

To accomplish this, obtain the bulbs towards the end of August, or early in September, and pot them at once. Bury them in ashes, in the usual way, and when thoroughly well rooted, and beginning to push a bit at the crowns (not before), take them out, clean them, and bring them gradually into light and a moderate warmth. This will be about the end of October, or early in November. If you can give them a gentle bottom-heat so much the better. When the spikes begin to rise place them on a shelf near the glass, in a temperature of sixty to seventy degrees, and always keep moist. If properly managed there should be no difficulty in getting the plants in bloom by the date mentioned, but very careful culture will be necessary throughout, any neglect or mistake being fatal.

Possibilities of Seedlings.

Are seeds of single Hyacinths of any use, or is it waste of time to attempt their propagation?

We should certainly sow these seeds, and grow the plants on to the flowering stage, for you never know what you may get in a batch of seedlings. The possibilities of raising plants in this way are almost infinite.

Potting Roman Hyacinths.

When is the proper time to plant Roman Hyacinths?

Roman Hyacinths may be planted (in pots or boxes) at any time from August till December, according as the flowers are required early or late.

Short Flower Stem.

In growing Hyacinths in pots, I find a difficulty in getting a sufficiently long stalk, the blooms coming close to the mould. What can I do to prevent this?

This fault sometimes arises from the bulbs being imperfectly matured, and sometimes from their being taken from the plunging bed too soon, before they have made sufficient roots. Such plants should have a genial warmth; and two or three doses of nitrate of soda, or sulphate of ammonia, half an ounce to the gallon, is often beneficial. Hyacinths should be more loosely potted than most things, and a light, free soil be used.

Soil v. Cocoanut Fibre.

Can I grow Hyacinths (not Roman) in Cocoanut fibre?

Hyacinths may be grown moderately well in the material mentioned, though they will not be so fine as if soil were used.

Stimulating Glass-grown Plants.

Will you tell me if, and how, I can give Hyacinths growing in water any fertiliser or stimulant?

The best thing to apply to Hyacinths in glasses is a few grains of sulphate of ammonia—or nitrate of soda. If just dropped into the water, it will soon dissolve, and greatly improves the size and colour of the blossoms.

Treatment after Blooming.

What is the best way to keep Hyacinths during the summer? I have a number of named varieties which have just finished blooming, and I want to keep them for next season.

The best thing to be done with these flowered bulbs—which are presumably in pots—is to harden them off quietly in a cool frame or pit, and towards the end of March, or in April, plant them out in any sheltered bed of good soil, burying the bulbs about six inches deep. Here they will complete their growth, and ripen their bulbs properly. If flowered again in pots another season, they will only produce inferior spikes, but under the treatment described they will continue to bloom, more or less well, for several years.

Two Flower Stems.

What is the cause and prevention of two flower-stems coming out of the same bulb, and one, of course, spoiling the other?

This is due to some error in the culture of the bulbs, or, at any rate, to the conditions under which they were grown, and cannot be obviated by any special treatment—the fault of course lies within the bulbs.

Unsatisfactory Blooms.

I have some Hyacinths in pots, which have formed much leaf, but are showing very small blooms—can you give a reason for this?

It is difficult to state the reason these bulbs make so much growth. Probably it is due either to the use of a too rich soil, or to the fact of the bulbs being imperfectly ripened.

Watering after Potting.

When I pot Hyacinth bulbs, should they be watered before covering with ashes or Cocoanut fibre?

If the soil is in a fairly moist condition, no water need be given, but we prefer to use soil in a half-dry condition for potting, and give a good watering afterwards, letting the pots stand for a day or so to drain, before plunging. If the soil is at all dry, the bulbs will not form roots. Put a little sand below each bulb.

When to Lift Bulbs.

Should I take up Hyacinth bulbs after flowering, or can I let them remain in the ground over the summer and autumn?

The best time to take up the bulbs is when the foliage has died down. Leave them alone till then if possible, but otherwise take them up, and replant in a sheltered bed of light, rich soil.

HYDRANGEAS.**Aspect Unsuitable.**

I wish to remove a Hydrangea from the top of a rockery to a rather dry border which faces east. Can I do so safely?

A rockery is not a proper place for these plants, which delight in a good depth of rich, loamy soil, and should have plenty of water in dry weather. The east aspect is not so good as west or south, but it may do; the border should be trenched to a depth of two to three feet, and rather liberally manured.

Blooms Failed.

I have a large Hydrangea, which this year has all run to leaf, and not a single bloom. Is it any good keeping it till next year, or, once blind, will it always remain so?

Leave the plant alone, except to thin out any weak shoots, and it will

probably bloom next year. Perhaps you have treated the plant too well. It should have plenty of light and air.

Blue-tinted Flowers.

What is the best way of giving Hydrangeas iron, to produce a blue tint? I have tried a weak solution of iron sulphate, without effect.

Market-growers mix iron filings with the soil, or sprinkle them on the surface of the soil afterwards, and prick them in, but the sulphate ought to have been more effectual. The proper strength is an ounce to the gallon.

Compost for Potting.

Kindly inform me the proper potting mixture for Hydrangeas.

Use a compost of good, fibrous loam, with a fourth or fifth part of decayed manure, or leaf-mould if the loam is at all heavy, and a sprinkling of bone-meal or some other tried fertiliser.

Exhausted Soil.

I have a Hydrangea in a box. Four years ago it was covered with blooms. Since then it has not flowered at all. Is the soil not good enough?

The soil in the box is evidently exhausted, and the plant cannot, consequently, make growth enough to bloom. It should be turned out and replanted in fresh, rich, loamy soil, in the early autumn, when it will soon commence to flower again.

Failure through Pinching.

Can you tell me why young Hydrangeas, planted out in a large tub, have not had a flower? They were pinched in spring, some time before putting in the tub, and have made plenty of foliage, and not on the young growth.

These plants failed to flower owing to the pinching in the spring. The Hydrangea blooms on the well-ripened wood of the previous season only.

Green Flowers.

I have a Hydrangea, and the flower is just coming out, but it remains green. Do you know the cause?

This is quite right—the flowers, or, rather, bracts, of these plants are always green when they first expand, passing to white or pink in a short time.

Housing a Pot Plant.

I have had a Hydrangea in a tub out of doors all the summer; would it be wise to put it in a box-room which gets a good deal of sun, for the winter? I have no greenhouse.

This plant should certainly be housed in some way for the winter, but a light shed would be better than a dry room. Still, this will be much better than nothing.

Large Blooms.

What is the best treatment to give Hydrangeas to get good-sized blooms?

To obtain fine blooms, the plants must be grown strongly, and the growth be well ripened by free exposure to sun and air. Pot firmly, give plenty of water while in full growth, or bloom, and some liquid manure while the trusses are developing, and syringe the plants occasionally overhead in fine, warm weather. The largest heads of bloom are obtained from young plants, with a single stem, growing in 5-in. or 6-in. pots.

Neglected Plants.

In a neglected garden, I find several tall and straggling Hydrangeas. Should they be cut back, and when?

These plants had better be cut back, but not too severely, when they begin to grow again, in April or May. Top-dress them with some decayed manure or rich compost, and they may bloom towards the autumn.

Potting-up.

I want to bring a *Hydrangea* from the garden into the house; in so doing, should I shake the roots free of mould, and put them in fresh?

Do not shake all the soil off the roots; leave some, and use a little fresh material.

Pruning *Hydrangea paniculata*

I have fine specimens of *Hydrangea paniculata grandiflora* planted round my lawn. Will you tell me how, and to what extent they should be pruned? They each possess about nine stems about three and a half feet high.

These plants should be rather severely pruned, and unless very large specimens are required the outer stems had better be cut back to six or eight inches in length, those in the centre being left slightly longer. Prune, as far as possible, to buds pointing outwards, especially in the case of the outer shoots.

Ripened Growth Needed.

Will you kindly inform me what is the reason my *Hydrangeas* have not bloomed this season? They have grown very strong and healthy, under glass in a cold house.

No doubt the wood of these plants was not sufficiently ripened to bloom—they flower principally on the well-ripened growth of the previous season. The plants would be better standing outside during the summer and early autumn than under glass.

Specimen Plants.

I have some *Hydrangea hortensis* in 5-in. pots, just coming into bloom. I wish to grow them on into large specimen plants as quickly as possible. Can you give me instructions as to their future treatment?

Let the plants alone until the bloom is over, then cut back the stems that have flowered moderately, and when breaking again move them into pots about three inches larger (in diameter), using rich, loamy soil, with free drainage, and potting firmly. Give them plenty of water when the larger pots become filled with roots, and towards the autumn expose them well to sun and air, to ripen the growth. If you prefer growth to bloom, cut out that now showing, and pot them on at once. They may have some liquid manure with advantage while in the small pots.

Striking Basal Shoots.

I have a *Hydrangea*, which has about eight long shoots with buds at the end, and around the bottom, springing up from the pot, are about ten young shoots. Can I take these off for cuttings, and, if so, how should I do it?

The young shoots referred to may be taken off and utilised as cuttings, but not until they have become about half-ripened at the base. Then take them off with a slight "heel," remove the lower leaves, and insert them singly in pots on sandy loam, with a little leaf-soil or peat, and free drainage. They must be plunged in a gentle hotbed, or placed in a glass-covered box in the greenhouse, to prevent flagging.

When to Repot.

When should pot *Hydrangeas* be repotted?

These plants should be repotted in the early spring.

Wintering in a Cold Greenhouse.

Can I keep some large *Hydrangeas* in pots in a cold greenhouse through the winter?

Hydrangeas are almost hardy, and will be quite safe in the house through the winter. Keep on the dry side in severe weather, to avoid the pots being split.

Winter Treatment

Please tell me how to treat Hydrangeas for the winter. I have several large pots and boxes of them. Must I cut them well back before the winter comes, or leave them to die off gradually?

Do not cut the plants back to any extent, or you will lose the early bloom that will be produced on the stronger shoots; but the weak shoots may be thinned out, and the plants trimmed up a little. They had better be top-dressed in the spring, removing a little of the old surface soil, and replacing it with rich, loamy soil, with a little bonemeal or other fertiliser added.

IRISES.**General.****Compost for Seedlings**

I shall be glad if you will tell me what soil to use in sowing Iris seed, also whether it may be sown in an ordinary flower-pot.

In sowing seed of Irises, it is better to use boxes, instead of pots, which dry out too quickly. Use a light compost of loam, leaf-mould (or peat), and sand.

Cushion Iris.

I have just received an Iris *Susiana*, which I am told requires special treatment as to water? Will you tell me what to do with it?

This is one of the "Cushion" or *Oncocyclus* Irises, and is very beautiful. It should be kept moist until the flowers are over, but soon afterwards be covered with a square or two of glass, or in any convenient way, to throw off rain, and by keeping the roots dry, to induce the plants to go to rest. If this is neglected the plants will probably fail to bloom the next season.

Danger of Late Transplanting.

I have some Iris that were put in last year, about thirteen inches apart; they have grown large, and spread a good deal. Would December be too late to move them?

December is almost too late to disturb or transplant these subjects. Leave them alone until next September, after they have flowered, when you can thin them out or transplant them, as you like. Moving them so late has a strong tendency to prevent the plants flowering.

Distinction in Species.

I have a mixed lot of Irises (roots). Some have broad, ribboned leaves; others are grassy-leaved (in tufts); and one has a delicate, grass-like spike. Can you give me an idea to what class they belong?

The foliage of Irises varies so infinitely that this would be an almost impossible task, but the broad-leaved plants probably belong to the German section. The English Irises have comparatively narrow, grass-like leaves, while those of the Spanish kinds are even narrower, but beyond these there is an almost infinite range.

Dividing Rhizomes.

A friend has offered me a number of rhizomatous Irises. Would it be safe to divide these up in February, and replant?

Yes; the rhizomes may be divided up and replanted at the period suggested, but, of course, you would not have much bloom the first season.

Early-flowering Varieties.

Will you tell me if *Iris stylosa* and *I. reticulata* are suitable for ordinary border cultivation?

I. stylosa and *I. reticulata* are early-flowering species, and only require

to be planted in a fairly light and well-drained soil, and in a somewhat warm and sheltered position, to succeed and bloom well.

Greenhouse Treatment of *Iris reticulata*.

How must I treat *Iris reticulata*, now flowering in pots in a cool greenhouse, to get it to flower again another year, in pots, if possible?

If carefully supplied with water and liquid manure, after flowering, until the foliage began to wither, and then gradually dried off, they would probably do well, but, on the whole, it will be better to plant them out for a year or two.

Pot Culture.

I have planted the following in pots, and wish to grow them in a cold greenhouse:—*Iris alata*, three bulbs in a 7-in. pot; *I. Pavonia*, four bulbs in a 5-in. pot; *I. reticulata*, three bulbs in a 7-in. pot; and *I. tuberosa*, four bulbs in a 7-in. pot. Can I hope for them all to bloom a second year, and should they be repotted?

You have given the bulbs named plenty of room; however, it is a fault on the right side. Keep the pots cool, and the soil just moist. They may be plunged in ashes, and covered with a little Cocoanut fibre or moss until the growth appears, though it is not actually necessary if the pots are stood on a cool, moist bottom in a cold house. Whether they will bloom again the second year depends to a great extent upon how they thrive the first. Repot early next autumn, if necessary; but most Irises do not like being frequently disturbed at the root, and, unless the soil becomes sour or unwholesome, it would be better to depend upon a top-dressing.

Principal Species.

How many kinds of Irises are there besides English, Spanish, German, and Japanese?

Beyond those mentioned there are the *Oncocyclus* or "Cushion" Irises, a small class of *I. sibirica* (early-flowering), and a number of miscellaneous species and varieties, such as *I. alata*, *I. cristata*, *I. monspur*, *I. persica*, etc. The genus is an exceedingly large one, and the various species and varieties almost innumerable.

Protecting *Iris stylosa*.

Would *Iris stylosa* bloom in the winter if put into a large pot, kept out of doors except in frosty weather, when it could be brought in for protection?

There is no reason why the *Iris* named should not succeed under the treatment suggested. It is very hardy and robust, and sometimes pushes up its flowers through the snow, but, of course, it is the better for a little protection.

Raising Seedlings.

I have some seed of an *Iris*, which I saved from last year's bloom. What is the correct way and time of sowing it?

The seed may be sown as soon as it is ripe, or at any time in the early months of the year, preferably in a good-sized box, with a square of glass placed over it until the plants are up and getting strong, when it should be gradually removed. When strong enough, plant them out, at first in a nursery bed, at six or eight inches apart, and afterwards transfer them to their flowering quarters.

Reticulata in Pots.

Will these bulbs do better in pots or in the garden?

These should be planted out in a sunny, sheltered position in the garden; but they may be grown in pots.

Soil too Heavy.

I have four clumps of *Iris stylosa* in a warm corner, at the foot of a high wall, facing south-west, in heavy clay soil. The foliage is most luxuriant, but there is not a single flower in either the winter or spring. I should be glad of a hint as to the best method of procedure.

What these plants undoubtedly require is a lighter soil—clay is too cold and heavy for them. Make up a border with a mixture of nice free loam, with about a third each of leaf-mould and peat, and plenty of sand, with good drainage, and they will bloom freely. Keep them as dry as possible during the latter part of the summer and autumn. The aspect is quite correct.

Too Deeply Planted.

I moved a big clump of the common English *Iris* (*Anglica*) last autumn, and planted the tubers about nine inches deep. They have made splendid foliage, but no flower spikes. Why is this?

These were planted far too deeply—the roots should be covered with not more than two inches of soil.

Treatment of *Iris ochroleuca*.

I have had an *Iris ochroleuca gigantea* for several years, but it has never flowered. Can you tell me the way to treat it?

I. ochroleuca (*orientalis*) *gigantea* is one of the semi-aquatic species (a "beardless" variety). It should be kept constantly moist, if not wet, at the root during the growing season (spring and summer), when it seldom fails to bloom well. If the soil is naturally light and dry, it should be grown near a pond or stream, or in bottomless tubs sunk in the ground.

Unsuitable Position.

I have a Gladwin *Iris* on a rockery. It has been there two years; but, although the leaves are healthy, it has never flowered. The rockery is well drained, very dry in the summer, and dressed with manure annually in November.

This plant needs more moisture. Remove it to a rather damp border of good, loamy soil, and it will flower.

German *Iris* (*germanica*).**Blooming.**

Will the German *Irises* bloom freely the first year after planting, or do they require some time to get established?

If fairly strong roots of German *Iris* (*germanica*) are planted, they should bloom to some extent the following season, and more abundantly in future years.

Flag *Iris*.

What is meant by Flags, or Flag *Iris*?

The term is usually applied to the ordinary German *Irises*.

Foliage Dying.

I planted some *Iris germanica* in the spring, just keeping the top of the rhizome level with the soil surface. The grass or foliage has now died off. Should the rhizome have been entirely buried? And, if so, to what depth?

You appear to have planted the *Iris* roots in a fairly correct manner, though it would have been better to have put them in a little deeper—about two inches is a good depth. No doubt the cause of the plants dying down so early is that they have suffered to some extent from drought. If the soil is fairly good, leave them alone, but cover the whole with an inch or two of old hotbed manure, or rich, light compost.

Situation for Planting.

Will you inform me if German Irises require a sunny or damp, shady situation?

These plants are not very particular, and often do well in the shade, but an open and sunny position is best.

Japanese Iris (Kaempferi).**Dividing the Roots.**

Should Iris Kaempferi be taken out of tubs and divided, after being in two years? They bloomed beautifully the first year, but not so well the second?

Yes; after being in the tubs for two years, it would be as well to divide and replant the roots. It is a good plan to pour some liquid manure on the soil in the winter, as this greatly enriches it.

Lifting the Roots not Necessary.

What should be done with the bulbs of Japanese Iris that I lifted after they had bloomed, and put in a corner of the garden?

Why lift the roots at all? It is unnecessary, and, if anything, injurious, for it is when they have formed good large clumps that they give the best results and display their true beauty. Replant them, and let them alone for a few years. The great point is to keep them growing almost in water during the summer, but comparatively dry in winter.

Manuring the Soil.

In preparing a tub in which to grow Iris Kaempferi, should I mix some manure (of which I have plenty) with the soil?

Yes; some well-decayed manure mixed with the soil will be beneficial to these plants.

Number for a Tub.

I have some imported clumps of Iris Kaempferi, the size of a 4-in. pot. I planted three in an ordinary wooden lard-bucket (in six or eight inches of good soil), which is now standing in an open shed, intending, when growth begins, to fill same with water, and sink tub in open ground. Is this right?

These plants are of a very strong-growing nature, and three in an ordinary lard-tub is two too many—one would be sufficient. Again, although they like plenty of moisture while in growth, some drainage must be provided. Place one plant in each tub, and sink them in the ground, but allow any superfluous moisture to drain away.

Seedlings Blooming.

Will seedling Japanese Irises bloom the first year out in the open, or could they be grown more satisfactorily in pots?

These plants cannot be expected to bloom the first year from seed—it would probably take three or four years. They are hardly suitable for pot culture; they would do better in tubs, swamped with water during the summer. If pots are used, they would have to be very large ones.

Tub Culture.

I am starting two bog tubs for Iris Kaempferi. Shall I be right in putting about six inches of stones, broken pots, etc., at the bottom, then filling up with turfy loam, leaving the plug at the bottom out, till March or April?

What you propose to do is as nearly as possible correct, but there need not be so much as six inches of drainage—three or four inches, with some "rough stuff" (bits of turf, or littery manure) placed over it, but be sure to keep the passage to the plug clear. For the Iris mentioned, the tub must be flooded with water during the whole period of growth and bloom, but the water should be drawn off towards the autumn.

When to Transplant.

What is the correct time for transferring Japanese Iris, now planted in north border, to tubs standing on garden path? Could they be left in the tubs next winter, if the water is drained off?

The autumn is the best time to plant these delightful subjects. A foot or so of soil will suffice, and if the water is drained off they will be quite safe in the tubs in winter, but a sheltered position would be advisable.

Winter Mulching.

I have a bed of Japanese Irises. Should I have it mulched with rotted manure in winter? The Irises are planted in rows, so that the manure could be put between, if it is not proper to cover them entirely.

It is not really necessary to mulch these Irises with manure, or anything else, during the winter, as they are quite hardy; but they may be watered with liquid manure occasionally during the winter season with benefit.

Spanish Iris (*Xiphium*).**Cultural Directions.**

Kindly give short cultural notice on Spanish Iris.

The culture of these beautiful subjects is very simple. They may be grown either in the open ground, or in pots or boxes under glass. Plant from early September to the end of November, but as a rule the earlier the better. A light, loamy, or peaty soil is best, and the bulbs should be planted rather closely, and two or three inches deep. When grown in boxes or pots, they must be kept quite cool until the flower-buds appear, when they may be gently forced.

Forcing Impracticable.

Please tell me how to grow Spanish Iris so as to have them in bloom for Christmas? I have a greenhouse, with heat up to sixty degrees.

We fear that you will find it impossible to get Spanish Irises in bloom at Christmas—they are rather "miffy" things, and will only stand very gentle forcing—in fact, if placed in a heat before the buds begin to appear, they usually go blind.

Mice Eating Bulbs.

Will a mixture of paraffin and water, with red lead, injure Spanish Iris bulbs and prevent them being eaten by field mice, in a wild garden?

All that is necessary is to roll the bulbs, before planting, in a mixture of red lead and water of the consistence of thick paint. Nothing will touch them when so treated; it is far better than paraffin.

Window-box Treatment.

In a window-box I have planted Spanish Irises each an inch or two apart. Will you tell me whether constant watering should be the rule?

The Irises are planted too closely—they should have been placed at least three to four inches apart. Keep the soil on the dry side until plenty of roots have been formed, and the plants are growing freely, when they should be liberally watered.

IVY.**Aphis Infestation.**

Is it possible to get rid of black-fly on Ivy? Every young shoot is thickly covered with the pest.

It is very unusual for Ivy to be attacked in this manner—are the plants starved at the root? There is nothing for it but to syringe, repeatedly if necessary, with some good insecticide. There is no means of banishing the pest permanently.

Dampness and Ivy.

Will Ivy grown against a house wall cause dampness?

No; how is this possible when the mass of overlapping leaves throws off rain from the wall, and the roots absorb a quantity of moisture also?

Effect on Walls.

Will Ivy, grown on a wall, "eat" out the lime between the stone or brick-work, or do harm in any other way?

Mischief is possibly occasioned sometimes by the aerial roots penetrating into the interstices of the bricks, etc., and, as they grow and increase, loosening and breaking away the mortar more or less. But no harm will be done provided the growth is kept within bounds, and the roots do not become too numerous and strong. Keep the foliage and lateral growth well clipped back, and when the stems become too old and large, cut them out, repoint the wall, and start afresh.

Ivy on Trees.

Is Ivy growing on an Oak tree likely to kill it? We admire the Ivy, as it is so picturesque, but would rather cut it off than kill the Oak in its prime.

The Ivy will cripple or kill the Oak, sooner or later, and the best thing to do will be to destroy the former at once. It looks very pretty, but the tree is of much greater value.

Propagating Variegated Ivy.

Kindly tell me how to grow Ivy cuttings (variegated) in pots?

As a rule, Ivies are probably the easiest of hardy plants to propagate (from cuttings), but some of the finer variegated kinds are usually grafted on to stocks of the stronger varieties, in order to infuse more vigour into the growth. Strike the cuttings in the open ground, inserting them in October or March, and pot them up when rooted. A fairly light or sandy soil is best, and it should be made firm.

Variegated Plant Reverting.

Would variegated Ivy be likely to lose its tints by the use of manure? I have a golden one, to which I gave a lot of manure, and this year's growth is almost a plain green.

The use of any quantity of manure has a decided tendency to destroy the variegation, and cause the plants to revert to the green form. Plants with variegated leaves should be grown in a rather poor, dry soil.

Varieties for Window-boxes.

Please say what kinds are most suitable for a window-box, including variegated, golden, and silver varieties?

Personally, we prefer the pretty, small-leaved native or wild Ivy to any other for this purpose, but you will find Silver Queen (tricolor), Mrs. Pollock (variegated, with gold), and Crippsi (silver, variegated), about the best. Some of the variegated Ivies are apt to grow too strong for boxes.

JASMINES.

Cape Jasmine.

How much should a yellow Cape Jasmine be cut back, and should the old wood be cut out?

The yellow, summer-flowering Jasmine (*J. revolutum*) only requires to be thinned out a little occasionally, removing any old or exhausted branches. Prune carefully, so as not to destroy too much of the summer's bloom.

Cool Greenhouse Varieties.

What is the best Jasmine to grow in greenhouse, with a minimum of forty degrees in winter?

Jasminum gracile (volubile), *J. odoratissimum*, and *J. grandiflorum* are some of the best kinds for a cool greenhouse.

Cutting-back.

Could you tell me the best time of year to cut back a white Jasmine on a wall, so as not to prevent it flowering well next year?

The best time to prune with this object is directly the flowering is over, but if the right kind of wood is left (short-jointed), it may be done in the autumn or winter.

Greenhouse Plant not Blooming.

I have a large plant of *Jasminum grandiflorum* trained on the greenhouse roof. I cannot get it to flower. Would pruning assist it to bloom?

As a rule, this plant does not want much pruning. It is probably cramped at the root, or starved in some way—hence its failure to bloom.

Object of Pruning.

Will you kindly tell me the right time to prune a white Jasmine, and how to do it?

The common or white Jasmine (*J. officinalis*) may be pruned at almost any time, though the work is probably best done as soon as the flowering is over. The correct method depends upon circumstances. In the case of young plants, which are desired to cover a considerable space, any strong growths, from the base should be trained and nailed in, as these will flower freely (on the lateral shoots) in future years; but in the case of old plants which have already filled their available space, these strong growths from the base of the plants should be cut out, as a rule (unless required to fill up any gaps, or to replace old and exhausted wood), thus concentrating the energies of the plant upon the short-jointed, twiggy portions, which always produce the bulk of the bloom.

Transplanting.

When is the best time to transplant the common white Jasmine?

The best time is in the month of October, but it may be done at any time up to the early spring, provided the weather conditions are favourable.

White Jasmine Failing.

I have two Jasmines growing as creepers on walls. They have borne no flowers for two years. Can you suggest a reason?

If these are the ordinary white Jasmines, the plants are probably starved and overgrown, and need a good dressing of manure, and careful pruning.

LABURNUMS.

Age for Blooming.

At what age do Laburnums commence blooming, and when is the most favourable time to plant?

This tree is rather slow in growth; it takes six or seven years to get a good blooming plant from the seed. The best time to plant is in the autumn—September or October.

Making an Arch.

Could an arch be made with Laburnums? If so, how would you make it over a four-foot path?

The Laburnum (or Golden Chain) is one of the most free-flowering of all hardy shrubs or small trees. It makes a capital arch (not too low), and to form one you should plant one (a dwarf) on each side of the path, take up three or four stems, and train these so as to meet and cross overhead.

Pruning not Necessary.

Can I, by pruning after flowering this year, increase next year's bloom on a Laburnum?

These plants do not require much pruning, as a rule, and bloom better

without it; but any very long or strong shoots may be shortened or cut-back entirely. The bloom is borne on the matured shoots formed the previous season, so that if the young growth is cut hard back, there will be no bloom at all.

Suitability for a Border.

Can you recommend a tree for planting in a border, close to the rails? I do not want it to be tall-growing, as it would take too much sun away.

The Laburnum is one of the best of the smaller-growing trees, is very effective, and does not throw a heavy shade.

Training a Seedling.

I have a Laburnum grown from a seed. It is now about six years old. When will it bloom, or does it have to be cut, grafted, or budded?

The Laburnum will bloom in due course, and probably without any grafting, etc., whatever. In the meantime it should be trained, or pruned, into any desired shape.

LAPAGERIAS.

Cultural Hints.

Could you tell me anything about the cultivation of Lapageria?

The Lapageria should be planted out in a well-drained bed of light, porous soil. A cool, shady house is the best—the cooler the better—as the plant, being a native of the forests of Chili, does not like the sun. The soil should consist of about two parts of peat to one of fresh loam, both in a rather rough or lumpy state, and some sand, or coarse grit. Water must be given in abundance during the period of growth and blooming, and even in winter the soil should be kept just moist. Train the long growths carefully to wires fixed near the roof, or against a wall, and take care that slugs do not get at the young shoots.

How to Propagate.

Please tell me how to strike cuttings of a Lapageria (white and red), and the best time to take them? Is there any difference in the treatment of the varieties?

It is a very difficult matter to strike cuttings of these plants—the best method of increase is by layering one or more of the long shoots. This may be done in a cool temperature, though a gentle heat is very advisable. The soil should be light and sandy—good peat and sand is about the best material. All the varieties—white, pink, and red—require the same treatment.

Repotting.

My Lapageria has flowered well, but now requires repotting. When is the best time to do it?

The Lapageria may be repotted at any time, but care must be taken not to bruise or damage the roots. If any are found to have decayed, they should be cut away, and, in potting, the soil should be worked well among them. The Lapageria always succeeds better planted out than in a pot.

Suitability for Shade.

I have a greenhouse which gets very little sun, and wish to grow a climber which will look as bright and green as possible. Can you suggest anything?

The best climber for a very shady position is the Lapageria, which dislikes sun, but it must be planted out in a bed, or good-sized box of light soil—not in a pot.

Winter Treatment.

I have a red and white *Lapageria* which have just finished flowering. What is their winter treatment, as regards watering, etc.?

These plants are practically hardy, but, being of a moisture-loving nature, the soil should be kept moderately moist during the winter, or as long as they carry foliage at all.

LAURELS.**Best Time to Prune.**

Is there any particular time of the year when Laurels should be cut?

The best time for pruning evergreen shrubs of this nature is in June or July, when the new growth is produced directly, and quickly hides the cuts.

General Hints.

Kindly give some hints as to the culture of the Laurel as a hedge?

The Laurel is a very easily cultivated subject, thriving in almost any soil, or in any position. It is propagated by means of cuttings inserted in sandy soil in a sheltered and partly-shaded spot in the autumn. It is not generally known that both the Caucasian and the Round-leaved (*rotundifolium*) Laurels are much hardier than the common kind, and the first in particular is very handsome.

How Often to Cut.

To keep Laurels neat and in good condition, how often should they be trimmed? Would it be possible to make one trimming do for a year?

Yes; one pruning annually, if properly done, is quite sufficient to keep a Laurel hedge in good condition.

Overgrown Hedge.

I have a Laurel hedge in good condition. Which would be the better—to lay it, or cut it? I want it five feet high, and it is now twelve feet high.

A Laurel hedge must not be "laid," but be cut-back, and this should be done in the summer, so that a good growth may be made before the winter.

Shape to Cut.

My Laurels require trimming. Should they be cut pyramidally, or with a flat top?

This is a matter of taste. The pyramidal form is perhaps the more natural of the two; but if the plants are large, and the height is not an object, the flat-topped form may be adopted.

Shears not Recommended.

Will it injure Laurels to prune them with shears?

The use of shears for work of this kind cannot be too strongly condemned. Nothing looks worse than a lot of leaves mutilated by this means. Use a sharp knife, trimming the shoots one by one.

LAVENDER.**Cultural Directions.**

Can you give me any instructions on the culture of Lavender?

The culture of this fragrant herb is not difficult, but it succeeds much better on some soils than others—a light, warm, sandy loam is the most suitable. Plant out, at about two feet apart, with a distance of three feet or so between the rows. Very little manure is required, unless the soil is very light and poor.

Gathering the Flowers.

What is the right condition of the Lavender flower in which to gather it for drying?

The spikes should be cut as soon as the lowest florets begin to fade.

Propagation by Cuttings.

When can I take Lavender cuttings? Should they be old or new wood?

Cuttings may be taken any time during the autumn. Fair-sized shoots, with hard wood, will root freely in the open ground. It may also be propagated from the young shoots in the spring. Make them three or four inches long, and insert firmly in sandy soil in a frame, or under handlights if possible, or otherwise on a half-shaded border in the open. Keep them always just moist, and by the autumn most of them will have rooted and made nice little plants; plant them out permanently in the spring. If there are any pieces on the plants that have already formed roots, these may be separated and planted out at once, placing them about a foot apart.

Pruning Straggly Plants.

How and when should I trim or prune Lavender bushes? My young plants grew tremendously last summer, but are straggly and untidy-looking.

It is not often that these plants require any pruning to speak of, being naturally of a bushy habit of growth; but, if necessary, they may be cut-back to any reasonable extent in the spring, April being probably the best time.

When to Plant.

Please inform me when to plant Lavender, and what kind, for a hedge?

Lavender should be planted in the spring—March or April—or in September, and either cuttings of the healthy shoots, or rooted slips from the base of the old plants, are usually employed. It may also be raised from seed. There are three or four varieties, but any of them would make a good hedge.

LILACS.**Bloom before Leaves.**

I had a dwarf Lilac in my greenhouse. It flowered profusely, but had no leaves. How can one have both flowers and leaves at the same time on Lilacs under glass?

When forced, these plants frequently produce the flowers before the leaves, and the only way to avoid this is to bring them on gently.

Cutting Superfluous Shoots.

I have just cut-back a Lilac which had been neglected for years. I find many tall shoots from the bottom. How shall I proceed with them?

The vigorous shoots from the base of the plant are almost useless, and should be cut away

Effect of Replanting.

Eight or nine months ago I planted a Lilac. It is not dead, but has only leaves at the ends of the branches, giving it a very leggy appearance. It is three feet high. Should it be cut down much smaller, to make it bear leaves, or will it improve next year as it is?

This has not got properly established since being replanted. It will not require cutting, and will, no doubt, make more satisfactory growth another season.

Flowering after Forcing.

Will Lilacs that have been slightly forced this year flower again next season?

Lilacs which have been forced will hardly be likely to flower well the

following season, but if planted out early, and good growth secured, they might do so. It is usual to plant them out and leave them one year in the ground before forcing them again.

Grafting and Budding.

Can I graft or bud a good Lilac on a common one? Which process would be most likely to do well?

Either process can be carried out. Grafting should be done in the spring. The best method would be either ordinary splice (or whip) grafting, or tongue grafting. Budding may be done later in the season, in much the same manner as Roses are budded.

Object of Pruning.

As my Lilacs had for some years borne no blossom, and grown very high and leafy, I employed a gardener to see to them. He cut them in a straight line, like a hedge. There is not a blossom this year—nothing but leaves, and a good deal of dead wood where cut. Can you give me directions by which I could see to them myself, how to know what will bear flowers, and where to cut?

The object to be aimed at in pruning a Lilac is to retain a moderate number of the strong, well-ripened shoots (the young wood), thinning out the weak or crowded growths, and also removing the suckers and any dead or worn-out wood. Perhaps the plants are getting old and exhausted, in which case some liquid manure, or a good mulch over the roots, will help them considerably.

Pot Culture.

Please tell me how to grow Lilacs in pots. I have a cool greenhouse, and a small forcing-house.

It is not advisable to attempt to grow these plants altogether in pots, as they require such constant attention in watering, and "feeding" with liquid manure, etc. Much the best plan is to plant out healthy little examples in good soil, and an open and sunny position; let them make a good growth, and lift and pot them in the autumn, to be forced in the winter or early spring. Some of the best varieties for forcing are Charles X., Marie Legraye, Madame Lemoine, and Souvenir de Louis Spath.

Preparing Plants for Forcing.

How should I treat a white Lilac (with the ultimate object of forcing) now in the open ground, the main stem eighteen inches high, with several side-shoots?

All that can be done is to keep the plant duly supplied with water in dry weather. A mulch of light manure will do good. The ripening of the wood is the main point.

Pruning Overgrown Plants.

Kindly state the proper time and method of pruning Lilacs (white and purple), which have grown very tall and too large for the space which can be devoted to them.

This may be done in either the autumn, or in the early spring. In order to do any good, the plants will have to be cut back severely, and an entirely new growth obtained. There will probably be no flowers for a year or two, but when the new growth becomes well ripened it will bloom.

Striking Cuttings.

When is the right time to strike white Lilac? Should it be done in heat?

The autumn is the right time for this; choose a sheltered, half-shaded spot in the open air, and insert the cuttings firmly in a "nick," cut with a spade, about six inches deep. No heat is necessary.

Treatment after Forcing.

Will you tell me the proper treatment of Lilies after forcing—should they be repotted, and afterwards cut back, or kept growing on in the greenhouse until they can be safely put out of doors? Is it best to plant them out, or plunge them in the pots in ashes during the summer months?

The plants may be cut back moderately after flowering, and should be kept in a quite cool greenhouse or pit until they can be planted out of doors, in April or May. It is far better to plant them out and lift them again in the autumn. They may be repotted, and kept in pots, but by this system endless attention in watering and "feeding" is necessary. Do not plunge the pots.

Unsuitable Neighbours.

I have a Lilac bush, about four feet high, in a small bed, with Privet growing round it about three feet away. It starts well, but when the leaves are about half size it stops growing. Could you tell me the cause, and the remedy?

The cause of the failing is undoubtedly the close proximity of the Privet, whose roots are robbing the Lilac. If you wish the latter to succeed, the Privet must be rooted out, then work in some good manure, and give the plant a few pails of water or liquid manure in dry weather. It will soon improve.

When to Expect Bloom.

How long are Lilacs before they bloom? I have had two white ones four years—they are short, bushy plants.

If these are the common white variety, they will probably not bloom until they attain a considerable height, and then only sparsely. Some of the new French kinds are much dwarfer and better. Get them to make a good growth, and if this is well ripened, they will bloom.

LILIES OF THE VALLEY.**After-treatment of Forced Bulbs.**

Will Lilies of the Valley that were forced last year, and then put out in the open ground for the summer, force again?

No; these must be allowed to make at least two or three years' growth before being forced again.

Aspect Favourable.

I have a vacant bed against the house, facing south-west, well sheltered from the north and east, and partly shaded by a tree. Would this be a suitable place to grow Lilies of the Valley?

This position seems a very favourable one, although it might be a trifle too warm.

Cultural Directions.

Please tell me the proper treatment for Lilies of the Valley grown outdoors?

The crowns should be planted in ground that has been well dug and manured, and in a lightly shaded position, in April, or the early autumn (we prefer the former), placing them in little groups of three or four, six to eight inches apart. All that is necessary afterwards is to keep the soil moist in dry weather, and mulch with leaf-mould or very old manure every autumn.

Effect of Dryness.

Please advise me the probable reason of a pot of Lilies indoors (not greenhouse) coming on splendidly, just ready to burst into bloom, when all the buds turned yellow and withered away. This was last year, and as the spikes are now up about two inches, I am anxious to avoid the same happening again.

Dryness at the root was the probable cause of the Lilies failing as

described—these plants must never be allowed to become even partly dry when being forced. We fear that those you have coming on now will not do much good, either—they ought to have been planted out last year, and fresh roots from the ground potted up.

Forcing Outdoor Plants.

Can Lilies of the Valley be taken up in spring from a bed in the garden, and forced?

Yes; strong clumps, or masses of the roots, if taken up, potted, or placed in boxes, with a light covering of leaf-mould, or other light soil, will soon push up in a moderate warmth. They must be kept constantly moist.

Manure at Fault.

Last year I had a nice bed of Lily of the Valley, and a good show of bloom. This year they have come up very poorly, and with spaces a foot square having nothing in them. In the winter the gardener put on what he said was "good, rotten manure." Would this be the cause?

The manure must have been applied too liberally, or was too fresh or strong—an inch or two of leaf-mould would have been far better.

Preparing the Ground.

Can you give me any hints on the making of a Lily of the Valley bed? Are cinders good to mix with the soil?

Where the ground is even fairly good, and not too heavy, it should be simply dug over well, working in a fair quantity of leaf-mould or old hotbed manure—if very light, cow-manure would be better; and, in this case, the addition of some good, fresh loam would be very beneficial, removing some of the old soil, if necessary. Do not use cinders or ashes, by any means; but some sand or road-grit, and leaf-mould, will benefit a heavy soil.

Retarded Crowns after Blooming.

Will you tell me how to treat retarded Lilies of the Valley after they have bloomed in autumn?

Harden the plants off a little in a cool pit or frame, and then plant them out in a bed of good, loamy soil, rather thickly. With an annual top-dressing of leaf-mould, or very old manure, they will make good flowering crowns again in about two years' time.

Retarded Crowns Failing.

I have lately tried forcing retarded Lilies of the Valley, but without success. I put them into a propagator heated by a hot-water tank. The temperature was generally about ninety degrees on top, though what the bottom-heat was I cannot say. They just started, and then rotted off. Is it possible that there was too much atmospheric moisture?

The retarded crowns do not require nearly such hard forcing as the natural ones, and the heat of the propagator was much too great for them, hence the failure. If the top heat was about ninety degrees, the bottom-heat would probably be much higher, whereas a bottom-heat of seventy-five to eighty degrees would have been much safer and better, certainly for these retarded crowns, and, indeed, almost enough for the others. Good, plump, retarded crowns that have never been allowed to become dry at any stage ought to start freely in a temperature of sixty to seventy degrees in December. Try again with a more moderate amount of warmth, and do not allow the crowns, or the soil, to become in the least dry.

Starting Retarded Crowns.

I have some retarded Lilies of the Valley which have been in a cold store for about eighteen months. Would it be best to put them in a cold greenhouse, or to force them at about seventy-five degrees?

If there is any vitality left in the crowns, they will start almost directly

in a cool house at this season (April), though it might be advisable to give them a very gentle warmth, but do not force them in any way. They must be kept regularly moist.

Temperature for Forcing.

What degree of heat is requisite to force Lilies of the Valley, taken up from the garden in spring, and brought into a house?

For early forcing, a bottom heat of seventy to eighty degrees is necessary; but less will do later on.

Thinning-out a Bed.

A bed of Lilies of the Valley, that did splendidly this year, looks somewhat crowded. Should I leave it, or thin it out? If so, how should I proceed?

It is rather a risky proceeding to "thin out" a bed of this Lily, and, as a rule, when becoming exhausted it should be broken up and replanted. Still, there is no objection to thinning out some of the crowns, where much crowded, filling the holes up with rich, loamy soil; give the entire bed a good dressing of leaf-mould or old hotbed manure subsequently. The crowns taken out should be replanted at once, in little clumps, six to eight inches apart, in another bed that has been well dug and manured.

Wet Soil causes Failure.

I have some Lilies of the Valley growing out of doors in rather a wet piece of ground. They produce very few flowers. Can you suggest anything to improve them?

This plant enjoys a moderately moist and cool or shady position, but can scarcely be expected to thrive in a really "wet" soil, and it is not surprising that it does not bloom satisfactorily. We should advise making a new bed in a rather less moist position, digging it well, and adding a fair amount of well-decayed manure before planting. In this plant some of the best crowns from the old bed. At the same time you might plant a few fresh crowns from another source, but this is optional.

When to Force.

Will you tell me when is the proper time to force Lilies of the Valley?

This charming subject may be forced at any time during the winter and spring, and by employing the retarded roots they may be had in bloom all through the late summer, autumn, and early winter, but in the early spring natural crowns forced in the ordinary way will give the best results.

LILIUMS.

Lilium auratum.

Basal Roots Lacking.

As none of my *Lilium auratum* bulbs seem to have the basal roots intact, would it be any good preventing these from flowering the first year, as I understand if they do so the bulb will then die?

Many bulbs of this Lily planted without any basal roots are grown and flowered the same year, but, as you say, they generally die subsequently. The plants form roots above the bulb, if properly treated, which keep them going. Grow them as well as you can, and pinch out all the flower-buds as they appear. If repotted in the autumn, they will probably do well and flower finely next year.

Blooms Failing.

My *Auratum* Lilies came up very healthy, with promise of doing well, but, after the heads of bloom formed, one and all began to fail and drop their petals, etc. They are in a sunny border. Can you account for their failure?

Probably the "sunny border" is accountable for the mischief, as in com-

mon with some others this fine Lily greatly dislikes the hot sun shining directly on its stems, and never succeeds so well as when the lower parts of the plants are shaded by shrubs, etc., while the tops enjoy the full light and sun.

Drying-off Bulbs.

I have some *Lilium auratum* which I was advised to take out of the pots and place in a box of dry sand. Was this treatment right, and, if so, when will it be time to repot the bulbs? I took them up in November.

You should get the bulbs repotted as soon as possible, for this Lily begins to form fresh roots very early—when it can. There is no harm in drying off the bulbs and giving them a short rest, but this ought not to be too long.

Growing-on Bulbils.

Can you tell me the proper treatment for the small bulbils that have formed at the base of my *Auratum* Lilies? Should they be kept growing on through the winter?

Keep these in sand or fine soil through the winter, and "sow" them in a pan or box of light, sandy soil in gentle heat in the spring. Plant out the little bulbs in a nursery bed when large enough, and transfer in due course to the borders.

Late-planted Bulbs.

Is January too late to plant bulbs of *Lilium auratum*?

January is rather late for this work. *Liliums*, and most other bulbs, should really be in the ground before Christmas, if possible. But late planting is often done, sometimes with fairly good results.

Privet causes Failure.

I have a *Lilium auratum* three feet high. It has seven or eight buds, but they do not open. It faces west, and is behind a Privet hedge. Is this position good for it?

A west aspect is a very suitable one for this and other Lilies, but its proximity to the Privet hedge is decidedly injurious. No doubt the roots of the Privet are robbing the Lily badly. It had better be taken up and replanted somewhere else.

Size of Pot.

Is an 8-in. pot a suitable size for growing a *Lilium auratum*?

Unless the bulb is very large, a smaller pot would be better.

Treatment after Flowering.

Will you tell me the proper treatment for *Lilium auratum*, after being flowered in pots. Should they be dried off and left in the pots, or turned out and stored in sand?

When the flowers are over, and the foliage is dying off, reduce the supply of water, and in two or three weeks' time turn the bulbs out, shake away the old soil, and repot in fresh material. As these and most other Lilies make fresh roots very soon after the flowers are over, this is much the better plan, but the soil must be kept almost (not quite) dry through the winter.

***Lilium candidum* (Madonna Lily).**

Diseased Plants.

My Madonna Lily stalks look like a greenish jelly, and have only very small buds. Is this a disease, and, if so, what is to be done?

This is the well-known Lily disease, which is of a fungoid nature, and very destructive. If not checked, it will spread rapidly. Cut the diseased parts away, and burn them, and smother the remainder with lime and sulphur. In the early autumn lift the bulbs, and replant in fresh soil with

plenty of soot worked in it, surrounding each with a handful of sand and sulphur. The bulbs should be sprinkled with sulphur when taken up, and any which do not appear quite sound had better be destroyed.

Need for Ripened Bulbs.

I have a white Madonna Lily, which has bloomed beautifully until this year; but, although the leaves are healthy, there is no flower. It is among Rose bushes, and I wonder whether some strong manure put on the Roses has not been good for it. I wish to move it, and would like to know when to do so?

It is probable this Lily may not have ripened off properly last season. As the manure mentioned did not harm the Roses, it would scarcely hurt a Lily. The proper time to move this and other Lilies is in the early autumn, just after the growth and foliage has died off.

Pots too Small.

I have put *Lilium candidum* in pots, I am afraid a size too small; if I find so later on, when the stems begin to grow, can I repot them into larger pots?

Yes, certainly, but repot them, if necessary, as soon as the roots begin to work round the sides of the pots they are now in, and before they become at all matted.

Removing Blossoms.

Should anything be done to large clumps of *Lilium candidum* which have bloomed very freely? Need the blossoms be cut off? All the leaves up the stems have withered or turned brown.

There is no need to cut off the blossoms, unless required for decorative purposes. As soon as the flowers are over the leaves commence to die away naturally. If the bulbs are much crowded they may be lifted, separated, and replanted in fresh soil, or liquid manure may be given.

Unsuitable Position.

Does my *Lilium candidum* fail to flower on account of being in too shady a place—it appears healthy?

This Lily likes a fair amount of sun, and, if in a very shady place, may fail to bloom from this cause. Like many other Lilies, it likes to grow where the lower part of the stems are shaded in some way, while the tops are fully exposed to the sun, or nearly so.

***Lilium longiflorum* (Harrisii, etc.).**

Cause of Failure.

I potted a *Lilium Harrisii* in a 9-in. pot in November. By the middle of June it had only reached eighteen inches in height, and showed one bud. I understood that it would flower freely. Do you think there is anything wrong with the bulb?

This must have been a weak bulb; as a rule, they produce five or six blooms apiece the first year. The pot, however, is too large; it would have done much better in a 5-in. or 6-in. size.

Culture and Forcing.

Will you inform me how to force *Lilium longiflorum*? I have greenhouses, heated and unheated.

L. longiflorum is a rather early-flowering species. If they appear to be backward, place them in the warm house as soon as the flower-buds appear. This Lily forces well, and by careful treatment may be had in flower quite early in the season. Plant the bulbs in pots, filled about two-thirds full with light, loamy soil, and, when in growth, top-dress twice or thrice with

good, loamy compost. Keep them cool, and about half-dry, until well in growth, when more water should be given.

Green-fly Infestation.

My Bermuda Lilies in a moderately heated house are infested with green-fly, and I find it difficult to get at the pests. Can you suggest a remedy?

To destroy the green-fly, or aphid, there is nothing so good as vapourising with nicotine.

Japanese or Dutch Bulbs?

Is the Japanese variety of *Lilium longiflorum* preferable to the Dutch?

On the whole, the Japanese-grown bulbs are to be preferred to the others, although they are liable to become more or less dried and shrivelled, as the result of the long voyage. Home-grown bulbs are really the best, if they can be obtained.

Need for Protection.

Is *Lilium Harrisii* suitable for outdoor cultivation?

No; this is not a good outdoor Lily. It should be grown under glass.

Overcrowded Pots.

I have some bulbs of *L. Harrisii*, the Bermuda (or Easter) Lily, three to a 6-in. pot; they are in a house with moderate heat. Do they require repotting and much watering?

Three bulbs of this Lily in a 6-in. pot are too many—one strong one would be sufficient. As soon as the plants are well rooted and in growth, they had better be moved into 7-in. or 8-in. pots, taking care to avoid injuring the tender roots. Water sparingly until the pots are well filled with roots, and the stems growing freely, when more should be given.

Winter Treatment.

I have potted some bulbs of *Lilium Harrisii* and *longiflorum*. How should I treat them for the winter? Should they be started in a warm house right away?

The best place for these plants during the winter is a cool or cold pit, from which frost is just excluded. Keep the soil nearly dry. They should be kept here until the growth is somewhat advanced, and the pots well filled with roots, when they may be brought into a warm house, and gently forced into bloom.

Miscellaneous.

Bulbils on *L. bulbiferum*.

Please tell me how to treat Orange Lilies which bloomed in the early part of July? The stems are now standing about three feet high; should they be cut down, or allowed to wither away? Some have what appear to be small bulbs forming at the top of the stems.

Let the stems of the Lilies remain until the foliage and stems turn yellow, or begin to die off, when they may be cut down. This is not the Orange Lily (*L. croceum*), but *L. bulbiferum*, which produces small bulbils on the upper part of the stems about August.

Culture of *L. giganteum*.

Kindly give me cultural directions for *Lilium giganteum*. Are they suitable for a cold greenhouse with south aspect?

This grand Lily may be grown in pots in a greenhouse, or in a damp, partly-shaded spot in the open ground. It is almost an aquatic. Pot the plants carefully in well-drained pots, with the usual compost of loam, leaf-mould and sand, a little peat being added, if at hand. Water freely when plenty of roots have been formed, and give liquid manure as soon as the flower stems begin to rise. This Lily is easily raised from seed.

Depth of Digging.

How deep should the ground be dug before planting Liliiums?

To a depth of at least two spades, working in leaf-mould, peat, sand, etc., according to the nature of the soil.

Dividing Tiger Lilies.

I have a clump of Tiger Lilies finished blooming, and wish to divide them, as some strong young shoots grow very near the old flowering-stem. Would you inform me at what time of the year to undertake the operation?

Directly the stems and foliage have died away, the bulbs may be lifted, sorted, and replanted. Like most other Lilies, these begin to form roots very soon after the growth dies off, and should be transplanted before this takes place.

Hardy Varieties for Pots.

Can you give me the names of some hardy Lilies suitable for pot culture?

Some of the best Lilies for pot culture are any of the numerous varieties of *L. speciosum*, white, rose, red, etc.; *L. Brownii*, *L. chalcedonicum*, *L. Henryi*, *L. longiflorum*, etc

Liliiums on a Hot Border.

Would you advise planting a row of Lilies, such as *L. pardalinum*, *L. speciosum*, *L. Brownii*, and *L. tigrinum*, at the back of a border which gets the sun all day, and is hot and dry? I should grow other plants in front, as a partial shade.

All the Lilies mentioned might be planted in the position described, with the exception of *L. pardalinum*, which delights in shade and moisture, and cannot be recommended. The soil must be well worked and enriched with leaf-mould or peat, if the Lilies are to thrive.

Martagon Lilies Overcrowded.

Some Martagon Lilies are overcrowded in my garden, and I want to take them up. They are late in blooming this year. When would you recommend me to lift them?

The bulbs may be taken up as soon as the stems and foliage have died down, but not before.

Plunging the Pots.

After Liliiums have done flowering, should the pots be plunged in the border outside, or should they be taken out of pots?

If the pots are plunged in the ground they will probably get full of worms, which upset the drainage and do harm in several ways, while, if left "free," the roots are liable to become too dry. The best plan is to plunge them to about two-thirds of their depth in coal-ashes.

Pot Culture.

I expect to receive in October some bulbs of *Lilium speciosum* Melpomene, and *L. Brownii*. I want them to bloom next year in a conservatory, which is heated in winter. Will you tell me the correct way to plant and treat them? I have some cold frames.

Pot the bulbs directly they come to hand, placing one in a 6-in. pot, or three or four in 7½-in. to 9-in. sizes. Drain the pots well, and use a mixture of about three parts of fibrous loam to one part each of leaf-mould and decayed manure, and half a part of sand. Fill the pots only about two-thirds with soil at first, and barely cover the bulbs. Keep them in the cold frames until growth is well started, and then remove to the greenhouse, top-dressing with good, loamy soil as the stems rise. The soil must be kept almost dry until growth has commenced. *L. Brownii* enjoys a rather lighter compost than *L. speciosum*.

Prompt Planting Essential.

I have some *Lilium speciosum* in pots out of doors; should I plant them in the borders in autumn, or put them in sand until the spring?

If the soil is fairly light and warm, the Lilies may be planted out in a sheltered position, but if it is heavy or damp they had better be grown in pots again. In either case, no time should be lost, as these Lilies begin to form fresh roots soon after the flowers are over.

Repotting or Top-dressing?

When *Lilium speciosum* (*lancifolium*) have bloomed in pots, should they be top-dressed, or repotted?

Shake them out and repot them as soon as the stems begin to wither, sorting them out and potting according to their sizes.

Selection for Unheated Greenhouse.

Will you please name three or four different kinds of Lilies, suitable for an unheated greenhouse?

The best of all Lilies for greenhouse culture are the varieties of *L. speciosum*, which succeed admirably in pots. Then come *L. auratum*, *L. longiflorum*, *L. krameri*, and *L. rubellum*.

Taking-up Liliiums.

Will it harm Liliiums to leave them in the ground through the winter, or should they be taken up?

With the exception of the comparatively tender *L. auratum*, *L. speciosum*, and a few more, the bulbs of all Lilies may safely be left in the ground all the winter, unless the soil is very heavy and damp.

Tiger Lilies from Seed.

I have received some wild Tiger Lily seed from Canada. When should it be sown, and what treatment should it have?

It is not at all difficult to raise this, and some other Lilies, from seed, though the plants will not bloom until the third or fourth year. Keep the seed in just moist sand, or the like, through the winter, to prevent its becoming very dry or shrivelled. Sow thinly in March, in a well-drained pan of light, peaty soil, with some sand, and place in a gentle hotbed, greenhouse, or warm window, keeping the soil regularly moist. Transplant the seedlings as they grow, and when sufficiently strong plant them out of doors, in a bed of deep, light, loamy soil, preferably in the spring.

Tiger Lilies in Pots.

Can I grow Liliiums *tigrinum* and *auratum* in pots? I have no frame or greenhouse.

Lilium auratum succeeds well in pots; *L. tigrinum* is usually grown in the open border, but it would no doubt succeed in a good-sized pot.

Varieties for Successional Blooming.

Please mention some of the hardy kinds of Liliiums for the garden, arranged to give a succession of bloom all through the summer?

L. candidum, *L. tigrinum*, *L. croceum*, *L. martagon* (purple), with its forms *L. m. album* (white), and *Dalmaticum* (deep purple), *L. chalcedonicum* (a bright red form of the above), *L. davuricum* (*umbellatum*) in many varieties, *L. pardalinum* and *L. elegans*, both with several varieties, *L. bulbiferum* (orange-red), and *L. canadense* (this requires a light, moist soil). The height varies greatly, according to the soil, position, etc.

Watering Newly-potted Bulbs.

I have just potted up my Liliiums, such as *auratum*, *speciosum*, *lancifolium*, and others. Do they require any water until growth commences?

Very little water is usually required until the Lilies have made good roots

and begun to push into growth, though if it should become really dry just enough should be given to moisten it, or the roots will not run in it as freely as they should do. *Lilium speciosum* and *L. lancifolium* are one and the same thing.

When to Top-dress.

Lilies potted three inches below the pot rim are now showing two inches above the compost. When should the extra two inches of top-dressing be put in?

The best time to top-dress the Lilies is when the stems are one to two feet in height (according to the variety), and the pots are getting full of roots. Give a dose or two of some gentle stimulant (liquid manure) first, and when the roots appear on the surface of the soil is the best time to apply the surface-dressing. See that the soil in the pot is quite moist before applying the former.

LOBELIAS.

How to Take Cuttings.

Having saved several roots of *Lobelia* (dwarf), ought I to take cuttings at a joint, or will any piece strike?

It is always best to take cuttings of any kind just below a joint, if possible, but almost any scrap of a *Lobelia*, if healthy, will root in moist sand, or very sandy soil, in a warm frame or house, at the proper season. Pull or cut off the lowest leaf, if it can be spared.

Methods of Propagation.

Should I be soon enough if I sow seed of *Lobelia* early next spring, to produce a number of plants of blue and white for bedding later?

Lobelias may be raised from either cuttings or seed, but by the latter method there is always a certain amount of variation in the habit and colour of the plants. Seed sown in a gentle warmth in February, or early March, and duly pricked off and transplanted into boxes, will make splendid flowering plants by May. But if you want them even and true, cuttings (preferably rooted) or stock plants must be obtained. Cuttings struck in heat in January or February may, when rooted and growing, have the tops taken off, and inserted as cuttings again, and the plants may be pulled to pieces and dibbled out in boxes later on.

Number in a Pot.

I have some seedling *Lobelias*, half an inch high, and want them for pots. How many should I put in a 6-in. pot for flowering?

Eight or nine plants in each will make nice potfuls, but it would be better to prick the little seedlings out into boxes first, and transfer them to the pots when stronger.

Preserving Cuttings.

Can *Lobelia* cuttings be kept in a cool frame during the winter?

No; a cold frame will not do. The best place is on a shelf in a greenhouse, from which frost is well excluded.

Pricking-out Seedlings.

Should seedling *Lobelias* be pricked out singly into other boxes when in the second leaf? I have always allowed them to grow as sown until bedding out, then planting them in bunches.

Seedlings of *Lobelia* ought certainly to be pricked out singly while quite small—when in the second leaf is rather young—but when half an inch to an inch in height would be about right. To plant out such things in little clumps is very bad practice, especially as seedlings often vary in colour,

and a plant with even two or three distinct shades would have a very peculiar effect.

Raising Seedlings.

I have sown some *Lobelia* in a box under glass, and would like to know how to manage it. I have no greenhouse. Should the box be stood out of doors in the day, and taken in at night, or kept all the time in a sunny window?

These plants must be kept in a temperature of fifty-five to sixty degrees at least until they become fairly strong, and the weather is genial and mild. The sunny window will do, but remove the box to the open air as warmth increases. Tilt the glass as the seedlings gain strength, until they will bear full exposure. Water when the soil becomes moderately dry.

Straggling Plants

The effect of my ribbon border is very much marred by the fact that the *Lobelia* is invariably of a straggling nature, and the blue not dense enough. Can you suggest a kind that would give satisfaction in a town garden?

There are several excellent varieties of the *Lobelia*, dark in colour and dwarf in habit, to be procured now, and we have found *pumila magnifica* perfectly satisfactory. *Lobelias* for bedding should be grown from cuttings, not from seed, as the plants are dwarfer in habit, and more even in colour.

Treatment of *L. cardinalis*.

Please tell me the treatment and habit of *Lobelia cardinalis*?

The plants should be taken up in the autumn, after flowering, and planted roughly in pots or boxes in a cool greenhouse or pit. When they begin to grow again in the spring, divide them into single crowns, pot in small sizes, grow them on in a frame or greenhouse, for a time, and plant out in May or June. They may also be raised from seed sown in heat in the early spring.

Wintering Perennial Varieties.

Will perennial *Lobelia* stand the winter in a sheltered border?

If the soil is fairly light and warm, and the winter not too severe, yes; otherwise, no. The usual practice is to lift the roots in the autumn, winter them under glass (in pots or boxes), and divide and replant in the spring, and this is decidedly the safest plan.

LUPINES.

Buds Dropping.

Why do some fine clumps of white Lupines send up their flower-stems, but drop the buds before they open? The foliage is in splendid condition, and plants of other Lupines almost touching them make grand spikes. What is the remedy?

Plants of the white-flowered Lupines are, like those of so many other things, comparatively delicate, and more likely to fail than the coloured kinds. At the same time they ought not to drop their blossoms in this manner—try the effect of a few applications of liquid manure (not too strong), guano-water (two ounces to the gallon), or nitrate of soda (one ounce to the gallon). A good deal depends upon the nature of the soil.

Cutting-down.

I have a fine bed of *Lupinus arboreus* Snow Queen. They have grown thick and bushy, four feet high. Must they be cut down to the ground for the winter?

This plant is really an evergreen shrub, and need not be cut down at all, though it may be trimmed up a little, or reduced, if desired, preferably in the early spring.

Early Blooming.

Will Tree Lupines bloom in May or June, if seed be sown the previous July?

Yes, in all probability, provided the plants are kept growing on steadily.

Pegging-down Shoots.

Would pegging down the shoots of Tree Lupinus Snow Queen be the proper way to increase it?

This is a good way to increase these plants, but the best plants are raised from seed.

Uneven Growth.

I have several shrubby Lupines, about two years old, large plants, with the branches mainly on one side of the stem. Should the branches be pinched back?

These plants ought to branch more evenly. If at all straggling, cut them back moderately in the spring. The culture of these plants (*Lupinus arboreus*) is quite simple, and, as a rule, they are very free-flowering. If the soil is rich, give a little lime.

MAGNOLIAS.

Absence of Flowers.

What would be the best to do to a Magnolia on a south-east wall? It is a large, old tree, which has never flowered, but is strong and healthy.

A Magnolia, if strong and healthy, as stated, ought to bloom well on the aspect mentioned. A light mulch of manure laid over the roots might prove beneficial, or a sprinkling of some good fertiliser occasionally, pricking it in lightly with a fork. On the other hand, the soil may be too damp or heavy for the wood to become sufficiently ripened; or, again, the growth may be too much crowded, and a little pruning be necessary.

Best Soil.

Please tell me the best soil in which to grow Magnolias. Are they suitable for pot culture?

A good, well-drained sandy loam, with a liberal proportion of leaf-mould and peat, suits these plants best. Except when young, they do not succeed to any extent in pots.

Manuring the Site.

I contemplate moving a Magnolia to another position. Should I manure the ground into which I intend to put it?

A moderate quantity of well-decayed manure may be added to the soil; but do not use too much.

Striking Cuttings.

May I ask how to strike Magnolias? I have no greenhouse. A sloping garden towards the south is all I can boast of.

Cuttings of these plants may be struck in pots of sandy peat in a close frame, or on a gentle hotbed, but it is of no use to insert them in the open air. They are taken in autumn.

Unsuitable Position.

I have some plants of Magnolia Alexandria in my garden, which have never flowered. They are in the open ground, and the district is rather cold. Would it be advisable to replant them against a wall, where it would be warmer, and more sheltered from the wind?

It would certainly be better to remove the plants to the base of the wall, as you suggest. Plant the tree fairly high, and quite firmly.

When to Plant.

When would be the best time to move a Magnolia, which is in an unsuitable position?

The best time for this operation would be early in October, or else in April.

MARGUERITES.**Compost for Pot Plants.**

What is the best compost to use for the ordinary Marguerites, to grow them successfully in pots?

A rich, loamy soil is most suitable, with free drainage and plenty of water when rooted out and growing freely, and some moderately weak liquid manure when the pots are full of roots. When grown in a sandy soil, water and liquid manure should be given freely.

Dividing Roots.

When is the best time to divide roots of Marguerites?

These may be divided in the spring, when they begin to grow again, but cuttings always make the best plants.

Flowers in Winter.

What is the treatment of the Marguerite to obtain flowers in winter?

These plants may be grown from young examples that have already flowered to some extent, and been cut back and restarted, or from cuttings grown on in pots during the autumn: bring either into a well-heated greenhouse in October.

How to Induce Floriferousness.

Last year my yellow Marguerites went all to wood. What treatment should be given to get plenty of flowers?

If planted out, the soil should not be very rich, but should be made firm about the roots; a sunny situation is also desirable. If in pots, they require rich, loamy soil, and plenty of water and liquid manure.

Leaf-mining Pest.

My Marguerites are attacked by the leaf-mining insect. What is the best means of getting rid of the pest?

Take off the worst leaves, and burn them; then watch for, and pick out with a prod, or squeeze between the finger and thumb, every insect as it appears. The plants may be sprinkled with a weak infusion of quassia and soft soap, which will tend to prevent the flies laying their eggs in the leaves.

Preserving Stock Plants.

Is it possible to keep my Marguerites through the winter? From tiny cuttings they are now fine bushes.

The only way will be to take up the plants early in autumn, trim them up a little, pot them, or plant in boxes, and keep them through the winter in the greenhouse, safe from frost, taking cuttings in the spring.

Striking Cuttings.

What is the best way to propagate the half-hardy yellow, white, and blue Marguerites?

Cuttings of these plants may be struck in a gentle heat in the spring, or in a cold frame in the early autumn—towards the end of August or early in September; and if trimmed and inserted in well-drained pots or boxes of sandy soil, very few will fail to form roots. They must be kept regularly moist, but the blue Marguerite (*Agathæa*) requires rather less moisture than the others. When rooted, pot them off singly into 3-in. or 3½-in. sizes, and subsequently move them into 5-in. or 6-in. pots, to flower; or plant out in May.

Treatment of Old Pot Plants.

I have some large yellow Marguerites, saved from last year, in pots. Should they remain in them, or would they do better if turned into the ground? They are between two and three feet high.

If they are kept in the pots, they will require a tremendous quantity of water and liquid manure, and, on the whole, it would be better to plant them out; but they will attain a very large size.

Wintering Cuttings.

Would cuttings of Marguerites be safe in the border during the winter? I have no glass.

It is useless to attempt to winter these plants in the open ground; they would be certain to perish, even if strong. They must be wintered under glass.

Yellow Varieties.

Will you tell me the scientific or catalogue name of the plant which is usually sold as the Yellow Marguerite?

The proper name of this plant is *Chrysanthemum frutescens lutea*. There are several forms in cultivation, the large, deep yellow kind being a good grower, but requiring skill to make a shapely pot plant. A smaller-flowered variety, with pale or sulphur-yellow blossoms, is distinguished by the addition of the word "alba" to the above, though it is far from being white.

MICHAELMAS DAISIES (Perennial Asters).**Cutting-down after Flowering.**

Should Michaelmas Daisies be cut down when they are done flowering? I cut mine down to the ground, but they have done badly this season. Was this treatment too drastic?

These must be cut down after flowering, and you did quite right. The probable cause of the plants not flowering so well as usual is that they are becoming exhausted, or "worn out." They are hungry, as well as thirsty, subjects, and, to do them justice, should be taken up, divided, and re-planted every two or three years, placing them in freshly-dug and well-manured ground.

Flowers Changing Colour.

A large bush of Michaelmas Daisies comes up with white flowers, but after some three weeks' sunshine the flowers turn bright lavender, almost lilac. Why is this, and is it usual?

It is no uncommon thing for the flowers of the white Michaelmas Daisies to change colour with age—some varieties are more prone to do this than others; *Aster versicolor* is the variety in which the change of colour is most decided.

Methods of Propagation.

What is the best way to increase my stock of Michaelmas Daisies?

The Michaelmas Daisy may be propagated by dividing the roots, either in the autumn when the plants have done flowering, or in the spring. They may be raised from seed, sown in autumn or early spring; and cuttings may also be taken.

Soil and Situation.

Is any special treatment necessary as regards soil and situation for growing Michaelmas Daisies?

These plants are most accommodating, and can be grown almost anywhere, but of course a sunny position is preferable. The ground should be deeply dug, and well manured before planting. A good, rich loam suits them best, but they are not very particular.

"Stopping" the Plants.

By "stopping" Michaelmas Daisies, is the necessity for staking them done away with? At what time and how much should they be shortened? Mine are now eighteen to twenty-four inches high, and are usually five or six feet high in the autumn.

This is quite correct. Stop the plants when they are about a foot or eighteen inches high, pinching off three or four inches of the tops, and they will bloom as well as ever, but will be only about two-thirds the usual height. Of course, only the naturally tall kinds require to be treated in this manner.

MIGNONETTE.**Culture of Tree Mignonette.**

Will you please tell me how to get a small tree of Mignonette?

Sow several seeds in each of some small pots (2½-in. or 3-in.), filled with good, loamy soil, made firm, and when the little plants appear pull out all but one—the strongest—in each pot. Move them on into larger sizes as fast as the roots begin to work round the sides of the others, and keep all the blossom-buds picked off as they appear. This will encourage a vigorous growth, and when the plants have attained a sufficient size, stop pinching, and allow them to bloom. Weak liquid manure should be given freely after the flowering pots are full of roots.

Spring Blooming.

What is the name of the large-flowered Mignonette that is sold in the spring, and when should it be sown?

Market growers usually employ either Miles' Spiral or the Matchet Mignonette, both of which produce very large spikes when well grown. To flower in the spring, the seed should be sown in September or October, in a cool pit or frame.

Successful Pot Culture.

Can you give me some information respecting the growth of Mignonette in pots? Mine grow such tall, slim plants, and the flowers are small. I have a heated greenhouse. Should any special variety be grown?

The secret of growing fine Mignonette in pots lies more in the culture than in the variety. It is not particularly difficult to produce good specimens, though it is more easily done in the country than in the smoky atmosphere of a large town. Mignonette does not require much heat, and is best grown as cool as possible, as a rule. Sow the seed thinly in 5-in. pots, filled to within an inch of the rim with good, fresh loamy soil, with about a fourth part of decayed manure, and a dash of soot and bonemeal added; drain fairly well, and press the soil down quite firmly; stand the pots in a cool frame, or on a shelf in a light, cool house, and keep the soil moist but never wet. When the plants are up thin them out to four or five of the best—one in the middle and four round the sides make a nice potful—and when a few inches high top-dress once or twice with rich compost. Water rather freely when the pots are full of roots, and directly the flower-buds can be seen give liquid manure, soot-water, etc., once or twice a week. Always keep the plants near the glass, with plenty of air, and tie to neat sticks when coming into blossom.

Tree Mignonette after Blooming.

A Tree Mignonette is allowed to grow for three years, when it goes to seed. Will the plant live on and bloom the next year, or will it die?

The effort of producing any quantity of seed is almost certain to exhaust the plant to such an extent as to render it practically useless subsequently, and it had better be thrown away.

Wintering in a Cold House.

I have a cold greenhouse—no heat at all. Will Mignonette thrive in it in the winter?

By sowing the seed late you can keep the plants in the greenhouse through the winter, to bloom in the spring, but Mignonette will not bloom in the winter in a cold house—it requires warmth. For winter flowering the seed should be sown in August.

MISTLETOE.**A Berryless Plant.**

We have a Mistletoe plant on an old Apple tree. It never bears any berries. Can you suggest anything we can do to make it do so?

This plant probably produces male blossoms only, or it may be completely barren—a freak. The plant is naturally dioecious—that is, having both male and female blossoms (separate) on the same plant. The only thing that can be done is to introduce a normal plant near to it, if possible, but even the result of this is doubtful.

Host Plant Dying.

I have a small Apple tree with a large growth of Mistletoe on it, which is very ornamental in my small town garden. The tree seems to be dying; if it dies, will the Mistletoe die also?

If the tree dies, the Mistletoe will die also, without a doubt; it is a parasite, and lives on the sap of the host-plant, whatever this may be, hence its exhaustive effect upon the latter when present in any quantity.

How to Plant Seed.

When planting Mistletoe berries on an Apple tree, should a slit be cut in the bark, and the seed simply rubbed in the slit, or should the bark be raised up, and the seed pushed underneath?

Do not cut nor raise the bark at all, but simply rub the berries into cracks in the bark, preferably on the under side of the branch. A little clay may be rubbed over each seed, but this is not actually necessary.

Propagation by Grafting.

I have tried to cultivate Mistletoe on my Apple tree, but the seeds do not come to anything. Is there any other way of inducing the parasite to grow?

Mistletoe may also be propagated by grafting. Make a slit in the bark of the tree with a sharp knife; cut a small, healthy piece of the scion to a flat wedge shape, slip it in, and bind carefully in place.

When to Propagate.

What time of year is right to propagate Mistletoe? How long does it take for it to grow to a size sufficient for cutting from?

The berries are ripe at midwinter, though they do not fall, and should then be rubbed into cracks in the bark. Some of them are almost sure to grow, and, in time, will become bushes fit to cut from, though it will take some years. The plant, as well as the seed, is perfectly hardy.

MONARCH OF THE EAST.**Growing-on Bulblets.**

I have acted on the directions, and after my Monarch of the East had flowered I planted it out in the garden, where it produced two large leaves, which have since died down. On lifting it, I found half a dozen young bulbs, the size of a marble, adhering. I have since replanted it in a 7-in. pot. Will the young bulbs develop better out of the earth or in it?

You have done quite right. Keep the plant in the pot (the soil should be light, rich, and sandy), but give very little water through the winter, with

plenty during the whole summer, from the time growth recommences. Take off the young bulbs, when ready, planting them a few inches apart in a box of light, sandy soil for the present, and potting or planting them out when in growth.

Method of Propagation.

Will you inform me how this bulb reproduces itself?

Like many other bulbs, this increases itself naturally by multiplication of the roots, and it is propagated by dividing these in the usual way.

Pot Culture.

I have had a root of the Monarch of the East for four months, and placed it as directed, in a warm room, on a table, on a piece of dry peat; but as yet it shows no sign of growth beyond a faint green tint at the top. Would it be well to plant it in moist sand, or other soil, to induce growth?

Yes; the bulb had better be planted, shallowly, in some light, sandy soil, such as a mixture of peat and sand, watering it very gently, occasionally. In this way they seldom fail to grow. They succeed better in pots than when started or grown on the dry system.

Supporting the Stem.

I have a bulb of Monarch of the East. What support should be given to it, as it grows?

The stem requires no support, as a rule, but should it seem inclined to "hang over" at all, stick a wire in the bulb, and tie the stem to it; or, if in a pot, use a stick, in the ordinary way. The leaves come later on.

Treatment after Flowering.

Will Monarchs of the East bloom again next year, if they are repotted and looked after? Each bulb threw up a lovely bloom, but these have died away, and have been succeeded by a green leaf, which is supported by a long, spotted stem.

Yes, if these bulbs are potted in any good, light soil, and grown on in a greenhouse or sunny window, they will make rather handsome plants, and flower again next year.

MONTBRETIAS.

Dividing Overcrowded Bulbs.

I have had Montbretias in large tubs and in flower-beds for three years; the bulbs have much increased, and are matted together. Should these be taken up and replanted—say, about three inches between each bulb?

Yes; when the bulbs get into this state they should certainly be divided. Place the larger bulbs singly, and about four inches apart, and the smaller ones rather closer. It may be done at any time up to the middle of April.

Most Suitable Position.

My Montbretias did not flower well last year. Will they do so under trees, or where getting only a little sun?

These like a warm, sunny, and open position, and do not thrive under trees.

Potting and Planting.

Will you tell me when to plant or pot Montbretias?

Montbretias for pot culture should be got in from November to January or February. Plant three or four bulbs in a 5-in. pot, or five to seven in a 6-in. size. In the open, if the soil is fairly light and the position sheltered, they may be planted in the autumn; but on cold, damp soils this had better be deferred till March, or the middle of April. Plant two or three inches deep.

Treatment after Flowering

Is it advisable to lift Montbretias after they have flowered, or may they be left in the ground through the winter?

If the soil is fairly light, these need not be disturbed, but they should be taken up if the soil is heavy or damp.

When to Lift Bulbs.

I want to take up some Montbretias, which this year have been behind-hand in blooming. At what time would you recommend their removal?

The bulbs may be taken up as soon as the stems and foliage have died down, but not before.

MYRTLES.**An Attack of "Blight."**

I have a Myrtle in the conservatory, with other plants. Its leaves are turning black. Is this the blight?

Your plant is probably suffering from an attack of aphid (or "blight"). The black stuff should be sponged off, and any insects destroyed, by vapourising with nicotine, or by syringing with some reliable insecticide.

Compost for Cuttings.

Will you tell me a good compost for potting Myrtle cuttings of last summer?

If the cuttings are well rooted and strong, three parts of loam to one part each of leaf-soil and old hotbed manure, with a good dash of sand and a dusting of soot, would make a suitable compost.

Flowers Absent.

I have two Myrtles, in pots. They look healthy, but I cannot get them to blossom. They are ten years old. Can you suggest anything to bring them into bloom? They are wintered in a greenhouse.

This is simply a matter of culture. If a vigorous growth is encouraged by means of repotting in the spring, or the use of liquid manure to established plants, and such growth is thoroughly ripened or matured, it will bloom freely. It is when the plants are so starved or neglected that they cannot make any new growth, to speak of, or the growth is imperfectly ripened, that they fail to bloom.

Hint on Watering.

I have been told that Myrtles do not require much water at any time, and none at all during the winter. Is this correct?

This is not correct. Water is most certainly necessary; being of an evergreen nature, they need moderate supplies even during the winter, and somewhat liberal applications while in growth and bloom.

Methods of Propagation.

Will you tell me the proper time, and best method, of raising Myrtles?

These charming plants are usually increased by means of cuttings, which may be taken either in the spring or early summer, selecting the young shoots, about three inches long, each with a "heel" of the older wood, and inserting them in pots of sandy soil, placed in a fairly warm house or pit, and kept close, moist, and shaded till rooted. Or pieces of the partly-matured wood may be taken in September, inserting them firmly in pots of sandy loam, and keeping them in a cool house over the winter, when the majority will have formed roots by the spring. Plants may also be raised from seed sown in the spring, when this is to be had.

Outdoor Planting Risky.

Will you inform me whether Myrtles are hardy or only half-hardy? I have a large one I should like to plant against a west wall, if it would do well.

This plant is, unfortunately, not quite hardy, and, if your locality is a cold one, it would be somewhat risky to plant the bush outside, even in the shelter of a west wall. In sheltered spots in the South and West, and especially near the sea, Myrtles succeed more or less well in the open air, though even here they frequently become "scorched" in severe winters. It would be better to keep it in a large pot or tub, and bring it indoors on the approach of severe weather.

Pruning not Necessary.

Do Myrtles require pruning or cutting-back annually?

These plants require very little in the way of pruning, except to cut back any luxuriant shoots; but if it is desired to reduce them in size, they may be cut back to any reasonable extent in the spring.

Size of Pots for Cuttings.

What size pots should I use for Myrtle cuttings struck some time ago? They are now four in a 5-in. pot.

If the cuttings are rooted, it will be well to repot them singly, using a 3-in. pot for each.

Wintering a Large Plant.

I have a sweet-scented Myrtle in a pot; it is too large to go in my small unheated greenhouse. How shall I protect it in the winter? Would stable litter do to cover and surround the pot?

Your best plan will be to plunge the pot to the rim in ashes, in the most sheltered position out of doors you have, and place a good layer of dry litter over the surface and round the stem—this can be removed when water is necessary.

NARCISSI.

Best Time to Plant.

Please tell me which is the best time to plant out Narcissus. Would they flower if planted in November?

These should be planted as soon as possible—October is the best month. If they are what they ought to be, they will bloom next spring.

Compost for Pots.

What soil would you recommend for growing Narcissi in pots?

A good, "sound" loam is the best material, mixing with it about a third part of leaf-mould or old hotbed manure, and a dash of bonemeal.

Growing in Frames.

I have two frames in a sunny situation, in which I thought of trying Narcissi for cutting. If I shaded well at first would they succeed?

Yes; there is no reason why some of the most useful Narcissi should not succeed here, whether planted out in the soil or in boxes. Cover the bulbs up well until they begin to make growth.

Offsets of Sacred Lily.

Are the offsets of the Chinese Joss Lily of any use, after the bulb has finished flowering?

You might try growing on some of them in the open air; but do not expect too much, as it is doubtful if they will come to anything.

Overcrowded Bulbs.

I have a stock of Narcissi, which this year bloomed for the third spring in succession, without being taken from the ground. There seemed to be signs of diminishing size of the blooms, and I assume the proper course would be to take them up, dry them off, and replant them. This, however,

is not possible, as the surface of the beds is covered with bedding plants. Would any good purpose be served by mulching them with a fertiliser?

From what you say, it is probable that the Narcissi are not suffering so much from starvation, or want of nutriment, as from overcrowding, and that, consequently, the proper course is to lift and replant the bulbs. Wait till the bedding plants are over, in September or early October, and then clear them away, and take up, sort, and replant the bulbs, in the usual manner.

Pot Culture.

To grow Narcissi in pots, is it better to keep them outside, or to bring them into the greenhouse or house?

Keep the pots in a cold pit, or in a sheltered spot in the open air, covering them with six or eight inches of ashes or cocoanut fibre, until the growth has fairly commenced and the roots are well at work; then clean the pots, and bring them indoors. Give them plenty of air and water when in growth.

Soil too Rich.

I have a row of *Narcissus* bulbs planted rather closely on a south border, which has been richly manured for Rose trees. This year there is no bloom at all on the bulbs. Is the border too rich for them?

No doubt the soil is now too rich for the Narcissi, and hence the failure. They always do best in an only moderately-rich soil.

Treatment of Sacred Lily.

Will you state what is the best treatment for the Sacred Lily (or Joss Flower) after flowering?

The bulbs of the so-called Chinese Sacred "Lily" (*Narcissus tazetta*) are of very little use after having flowered once—at least, such is the case in this country—and, indeed, they usually refuse to bloom again. The best thing to do with them is to plant them out, rather deeply, after flowering, in a bed of light soil in a sunny and sheltered situation out of doors. They cannot be forced again.

Unripened Bulbs.

I grow many bulbs in spring, and have done well with all except the *Polyanthus* *Narcissus*. They appeared to be fine, sound bulbs, but though they made abundance of leaves, there was not a blossom among them. What can I do to have better success next spring?

This must have been a bad, imperfectly-ripened batch of bulbs—as a rule, nothing is easier to grow. Keep them well supplied with water and liquid manure until the foliage begins to die off, when they should be gradually dried off, and the bulbs well matured in the sun, but as they are, in the pots and boxes—do not take them out until perfectly ripe. When the foliage has quite died away, take them out of the soil, dry them, and replant in the early autumn.

NERINES.

Compost for Potting.

I shall be glad if you can advise me as to the soil to use in potting *Nerine* *sarniensis*.

This handsome bulbous subject, which is also known as the Guernsey Lily, should be potted rather firmly in good, sandy loam, to which has been added a little leaf-mould or peat. Give good drainage.

Outdoor Growth.

I should like to grow some *Nerines*, but have no greenhouse. Is it possible, by giving protection in winter, to grow them outdoors?

Although some of these plants are almost hardy, we fear you would not

be successful with them outdoors, unless your locality is fairly mild. In that case, they might do well, planted out on a warm, south border, and protected with bracken, leaves, or litter on the advent of frost. *N. sarniensis* is one of the best for this purpose.

Potting and Repotting.

When is the best time to pot or plant *Nerines*? Do they require repotting every year?

The best time to pot the bulbs is in August. They succeed best when not too frequently disturbed at the root, and so do not often require repotting.

When to Water.

Will you favour me with directions as to the treatment of Guernsey Lilies, particularly as regards watering? I have one in a pot which has not been watered for some time, and now appears to be growing again.

This bulb usually starts into growth during the latter part of the summer, and flowers in the autumn. On the first signs of returning growth, water should be given, increasing the quantity gradually until the flowers expand; when these are over, again reduce the supply until the foliage dies away, when it should be withheld altogether. To ensure a vigorous bloom, place the plants at the foot of a south wall, after flowering, to ripen off the growth and the bulbs thoroughly.

Winter Temperature.

Could I hope to be successful with *Nerines* in a small greenhouse, with a minimum winter temperature of, say, forty degrees?

These plants may be successfully grown in a greenhouse of the type mentioned; but as their natural season of growth is the winter, a little extra warmth during this period is beneficial.

NICOTIANAS.

Culture of Tobacco Plant.

I have just received from America a few seeds of the Tobacco plant (*Nicotiana tabacum*), and shall be glad if you can give me a few hints on its cultivation.

The cultivation of the *Nicotiana* is a simple matter enough. The plant is a half-hardy or tender annual, and the seed only requires to be sown in a gentle hotbed or greenhouse in the spring, the plants being pricked off, potted, and finally planted out in deep, rich soil. The curing (for tobacco) is a rather intricate process, which we cannot explain fully, though the leaves have to be laid together and "sweated" when partly dry, and go through a number of other processes. For horticultural purposes, however, it is only necessary to dry the leaves gently, and if you attempt anything more you become liable to a heavy fine.

Effect of Frost.

I have a number of *Nicotianas*. Can they be left outside for the winter, or must they be lifted and brought indoors?

Most of these are half-hardy or tender annuals, which the first frost will kill—they cannot be kept in any way; but *N. affinis*, which is also usually treated as an annual, is a perennial, though not a perfectly hardy one.

How to Save Seed.

Can you tell me how to save the seed of *Nicotianas* for sowing next year? Wait till the pods (which are about the size and shape of Hazel Nuts) begin to turn yellow, then gather, dry them on paper in the sun, and shake out the seed.

Method of Propagation.

I have some choice *Nicotiana* plants, and should like to be sure of having the same varieties another year. Can they be propagated by cuttings taken off old plants, or must they be raised from seed?

You will have to save the seed of these plants, and sow it in a gentle heat next spring. They cannot be propagated by cuttings.

Sowing Seed.

I have recently sown seed of *Nicotiana Sanderae* in pots, but none has germinated. Will you tell me the correct way to proceed?

The seed-pots should be filled moderately firm, with good, loamy soil, and a little finer soil added to the surface, the seed sown on this, and a very slight sprinkling of fine soil over the seed; or, if watered down and covered with a sheet of glass, it is hardly necessary to add any soil after the seeds are sown. The seed-pots should stand where they are fully exposed to the light, without the sun coming on them.

OLEANDERS.**Blooms Damping-off.**

An Oleander in my low greenhouse was slightly cut back last autumn, and all the blooms are now up against the glass. Consequently, they damp off, or do not open properly. Can I cut it back to within three feet of the ground?

Yes; this plant may certainly be cut down to three feet (or even less) from the soil. The best time to do it is in the spring.

Cultural Directions.

I have two healthy Oleanders in large pots. They are covered with buds in the spring, but no flowers come, and it seems as though they are unable to expand. Are these plants very difficult to grow successfully?

The chief points in the culture of the Oleander (or *Nerium*) are, in the first place, to get them to make a vigorous and healthy growth during the spring and early part of the summer (by means of plentiful supplies of water and liquid manure at the roots, and repotting the plants in rich, loamy soil in April, if necessary), and then ripening this thoroughly by free exposure to sun and fresh air during the latter part of the summer and autumn. The plants must never want for water or nourishment at the roots from the time the buds appear until they open.

Flowers Failing.

Can you tell me the cause of the buds of my Oleander dropping off? On examining them, I find the buds withered up, as if for want of water, but I always keep it well watered. It is only in an 8-in. pot, and is more than four feet high?

From what you say, we conclude that the tree is starved, and this is the reason of the buds dropping. Give the plant some liquid manure, commencing with a dose or two of a weak solution of nitrate of soda or sulphate of ammonia, and afterwards an infusion of sheep or horse droppings, etc. Report it later

Lanky Growth.

I have an Oleander which has grown with one straight lead (no side-shoots), and is about two feet high. It is budded for bloom. Would cutting it down cause it to shoot from the lower part, or would it be best to leave it till it has done blooming?

Your best plan will be to leave this plant alone until it has bloomed, and then cut it down, when it will be sure to break up from the base. Insert the top as a cutting.

Potting Compost.

I have been advised to repot my Oleanders in April. They are about fifteen inches high, and are now in 5-in. pots. What is the best soil for them.

These plants thrive with a compost of sound loam, with a third or fourth part of decayed manure, some leaf-mould, sand, and a little old crushed mortar. Give good drainage. You had better repot your plants in 8-in. or 9-in. pots.

Remedy for Honeydew.

I have an Oleander in a cold greenhouse, covered with honeydew; will you please tell me what to do to remedy it?

This is a result of an attack of green-fly (aphis). Sponge all the affected parts over well, with tepid water, with a little soft soap dissolved in it, and when all is dry again, vapourise the house with nicotine.

Scale on Plant.

An Oleander in my greenhouse is covered with scale. I have tried washing the plant with yellow soap and water, in which quassia has been mixed, but it has been of no avail. Is there any cure?

It is difficult to eradicate scale—quassia will have no effect on them. Put a wineglassful of paraffin into two gallons of water, keep it well mixed, and syringe the plant, taking care to thoroughly wet all parts. If this is repeated at intervals of three or four days, about three times, there will be little, if any, of the scale left. All plants will not stand the application of paraffin, but it is quite safe to use it on the Oleanders; they should be laid on their sides, so that the paraffin does not reach the roots.

Size of Pots.

I have an Oleander which stands five feet high, in a 10-in. pot. Will it want repotting this year?

A 10-in. pot is hardly large enough for a healthy plant five feet high. This is a very strong-rooting subject, requiring plenty of room. The plant had better be moved into a 12-in. or even larger pot in the spring, and, when rooted out again, water freely. The Oleander requires generous treatment, not starvation.

Striking Cuttings.

I should like to take cuttings of an Oleander which has grown so large I have no room to winter it. When is the best time to take them?

The best time to insert cuttings of these plants is in the spring, striking them in a gentle hotbed, or warm house; but if pieces of the half-ripened wood are inserted in pots of sandy soil in early autumn, and kept through the winter in an ordinary greenhouse, they will probably form roots by the spring, when they should be potted off and grown on in the usual way. If very dwarf plants are wanted, it is a good plan to take off the tops of shoots showing the flower buds, strike them in a gentle hotbed, with the tops kept cool, and, when rooted, move them into 6-in. pots.

ORCHIDS.**Anguloa Clowesii Dormant.**

I have an *Anguloa Clowesii* that lost its leaves about the middle of April, and has remained dormant for nearly six months; the bulbs are sound, the compost just moist, temperature between sixty and seventy degrees. Can you explain the cause of its failure?

This is a cool-house Orchid, and should be rested in a temperature of

forty-five to fifty degrees during the winter, when it will probably start into growth in the spring; then repot.

Calanthe without Leaves.

My *Calanthe* is throwing up some buds from the roots, but has not yet any leaves on. Should they be leafless like this before they start into growth?

It is quite natural for the *Calanthes* to flower before they make any leaves. Soon after flowering they will start into growth.

Cattleya Culture.

I have a few *Cattleyas* that have gone wrong lately. Can you advise as to treatment, temperature, syringing, and so on? In winter my house can be heated to seventy degrees by day, and sixty degrees at night.

During the growing season *Cattleyas* require a warm, moist atmosphere, and plenty of water at the roots; this should be given with a watering can, as the frequent use of the syringe is not good for them, as the water lodges in the sheaths. When the pseudo-bulbs are well developed, they require a period of rest, and may be kept cooler, and water withheld, but, where much exposed, care should be taken that they do not become dry enough for the bulbs to shrivel. When the flower-sheaths show, warmth and moisture may be again given. The temperature you name should be quite high enough for them.

Cœlogyne cristata—Separating Bulbs.

A *Cœlogyne cristata* is in flower now, in a 5-in. pot, full of bulbs. Can I separate them, and make more plants, or must I leave them together?

This easily-managed Orchid does not like being divided or disturbed at the root too much, or frequently, and always flowers best from a large mass of bulbs. It may be divided, of course, but takes some time to become established again—often two or three years. It would be better to move the plants bodily into a pot about two inches larger, after it has finished flowering.

Cœlogyne cristata—Watering.

I am perplexed as to how and when to water *Cœlogyne cristata*. The only possible way seems to be from the top. If water gets into the flowers, will it not rot them?

This Orchid requires plenty of water while making its growth, and a fair amount (though not so much) while the flower-spikes are rising. If too much is given while the flower-buds are forming, they will turn black and fall off. The water must be poured, gently, on the plant, as far as possible between the bulbs, and below the flowers.

Cœlogyne maesangeana Resting.

I have a *Cœlogyne maesangeana* in a house with a temperature of about sixty degrees. Should it be allowed to rest, or be kept growing all the time?

This Orchid succeeds best in an intermediate temperature, and requires a good rest, which should be given during the winter. It must be kept almost dry while at rest, though not so much so as to cause the pseudo-bulbs to shrivel.

Cypripedium insigne not Flowering.

I have some *Cypripedium insigne* which hardly ever flower. I have kept them shaded through the summer, syringed them twice daily, and potted them in sphagnum moss with some very fine crocks. Could you give a few cultural hints?

For one thing, your plants are potted in the wrong material—they should have only good fibrous peat and sand, mixed with a few broken crocks, and the pots nearly half full of crocks. Do not shade them too heavily, even

in the summer, but a moderate amount of syringing is all right. These plants are of easy culture, the main thing being the watering. Being ever-green, they should never be allowed to become quite dry.

Dendrobium Culture.

Will you tell me whether it is right for *Dendrobium Wardianum* to shrivel while at rest? A few hints on its culture and on *D. nobile* will be acceptable.

The pseudo-bulb ought not to shrivel while resting in the winter, this being prevented by giving a little water occasionally, but very little. The plant should be grown on freely during the summer, and rested in a comparatively cool temperature in winter. Great care must be taken that it does not start into growth a second time towards the autumn. *D. nobile* requires the same treatment.

Dendrobium Propagation.

Will you advise as to the propagation of *Dendrobium nobile*? The plant has about half a dozen stems, twelve inches high—some with and some without leaves. There are two bunches of air roots, and from each a shoot is starting.

This plant can be propagated by taking off the aerial growths when about three inches long, and potting them in $3\frac{1}{2}$ -in. pots, in peat and sphagnum moss, with plenty of crocks, keeping the base of the growths well elevated, and supplying them with water when necessary, and exposing the plants well to sun and light.

Lælia Bulb Gumming.

I notice, on one of the young bulbs of *Lælia purpurata*, small drops of transparent, sticky liquid, which apparently exude from the pores. I have rubbed it off more than once, but it appears again. Can you tell me what it is? The plant seems quite healthy.

This is a kind of gumming, or "bleeding" (extravasation of sap), due to an unhealthy condition of, or some injury to, the bulb. Try the occasional application of a little quicklime, or some powdered charcoal.

Lælia Treatment.

I have just bought an Orchid (*Lælia anceps*). Can you give me any hints as to treatment?

This is a cool-house Orchid, though one of the most beautiful in cultivation. It only requires to be potted in the usual way, in a mixture of nodules of peat, sphagnum moss, and potsherds broken small, with very free drainage, and a surfacing of live sphagnum.

Odontoglossum Finishing Growths.

Should *Odontoglossum crispum*, the growths of which are not yet finished, be rested, or put into a higher temperature?

Odontoglossum crispum should be encouraged to finish its growths by giving it a temperature ranging from forty-eight to fifty degrees at night, and five degrees higher in the daytime, never allowing the plants to become dry, as the roots of this genus are more or less active all the year round. A good guide to watering is to keep the sphagnum moss nice and green, and stand the plants on a moist bottom. All Orchids, when once started to grow, should be kept on, and not rested during growth, for they cannot mature during the following year.

Oncidium sphacelatum Failing

Could you give me the treatment of *Oncidium sphacelatum*? It makes splendid growth every year, but does not flower.

This species requires an intermediate temperature. It flowers in the spring, from the base of the new bulbs. It needs a short rest after the

growth has been made, and should be repotted. Probably the growth has not been sufficiently ripened to bloom—expose the plant to plenty of sun and air during the autumn, and reduce the supply of water.

Vanda cœrulea—Temperature.

Will you tell me how to cultivate *Vanda cœrulea*? I have some roots brought from Burma. Some are attached to the wood of the tree on which they grew. Will it be sufficient to supply the others with a piece of wood?

This Orchid is usually grown in pots or baskets in this country, using the usual compost. It requires an intermediate temperature, or that of a cool stove suits it well—that is to say, a range of fifty-five to sixty degrees at night, to seventy or seventy-five degrees in the winter, and sixty or sixty-five degrees to eighty degrees or more in the summer.

Miscellaneous.

Definition of "Pseudo-bulb."

I have a *Cœlogyne cristata* in a 6-in pot crammed full of bulbs. Some have little leaves at the top, and others none. What is meant by pseudo-bulbs—are they those bulbs with no leaves?

The term "pseudo-bulb" refers to the bulbous growths of all Orchids of this class, in whatever stage; it really means "false bulb," or a bulb formed above the surface of the soil instead of underneath it, but acting as a storehouse of nutriment, all the same. The old or exhausted bulbs, without leaves, are pseudo-bulbs equally with the younger and more vigorous examples. The flower-stems do not proceed from the top of the pseudo-bulbs, but from the base of those formed last summer, and properly ripened. The natural character of this Orchid is to form a mass of pseudo-bulbs.

Growing Orchids from Seed.

I have ordered some Orchid seed, and shall be glad to know the best method of growing it.

Raising Orchids from seed is a very delicate process. It may be sown on the surface of a well-drained pan, filled with a mixture of peat, chopped sphagnum moss, and sand, though some growers say that it does best when sown on the mossy surface of the pots or baskets in which the plants are growing. In any case, it is a matter which you would find rather difficult.

Orchids for a Cool House.

I have a glass-house, a lean-to, which gets the sun all day, and should like to grow some Orchids. Can you tell me any that will grow in a cool house?

Several Orchids may be grown successfully in a cool house, but it is essential that frost be well excluded. Some of the best kinds are *Odontoglossum Crispum*, *O. Pescatorei*, and others, *Cypripedium insigne*, *Oncidium tigrinum*, and others, and *Masdevallia Harryana*, etc. You would have to procure plants already established in pots or baskets, for potting and starting imported Orchids is work requiring a good deal of care and experience, as well as a higher temperature than that of a cool house.

"Red Rust" on Leaves.

Some of the leaves on an Orchid in an intermediate house are spotted with something which looks like red rust. Is there a remedy for this?

Sponge or brush the affected leaves with a paint made of lime, sulphur, and water.

Starting Plants.

Some Orchids are being sent me, and I should be glad if you would tell me how I should treat them on arrival. They are in a dried state.

The proper treatment depends upon the kind of Orchids, and also on the

condition in which they arrive. The first thing to be done, however, is to trim them up carefully, cutting away all the dead leaves, dead roots, and rubbish. They should then be placed in a fairly warm and close greenhouse, with a moist atmosphere, and be rather heavily shaded for the first few days. Some place them on a bed of damp moss, to start, and this had better be done as soon as they begin to move a little. When fairly in growth, they should be potted, or placed in baskets, the soil usually employed being a mixture of rough, fibrous peat, chopped sphagnum moss, bits of charcoal, crocks or bricks broken very small, and a little sand. The pots should be filled nearly half full of drainage (crocks, etc.), and the plant be set high in the middle of each pot, with a good surfacing of sphagnum. It is impossible to give any general instructions for treatment, as that for the different kinds varies so greatly, and it would be wise to engage a skilled grower to start and attend to the plants, for a time at any rate.

Treatment of Seedlings.

A short time ago I ordered, by mistake, a small packet of Orchid seed, which I planted, as per instructions, on a piece of peat. I have now some small green growths, also some brown thread-like ones topped with red, which I presume to be seedling Orchids. How am I to proceed with them?

Unless the little plants are very thick (in which case they had better be transplanted or "pricked off" into similar soil), leave them until large enough to go into 2-in. or 2½-in. pots. The green growths are probably the young shoots, and the "brown, thread-like ones" the roots. Put them into small pots, half filled with drainage, the rest consisting of a mixture of fibrous peat, chopped sphagnum moss, and potsherds broken very small. Keep the heart, or crown, of each plant well up above the rim of the pot, and use a light surfacing of moss. Of course, the plants must be kept warm, moist, rather close, and shaded from bright sun.

PÆONIES.

Ants on Plants.

Will you tell me how to keep ants off the buds and foliage of Pæonies? They have quite ruined some very choice young plants.

Track the insects to their nest, or nests, and if not too near the plants pour into each either some paraffin or a kettleful of boiling water. Frequent disturbance of the nests also often causes them to "clear out." Failing these means, place a mixture of two or three parts of fine white (castor) sugar and one part of white arsenic, near their runs; this is generally effectual.

Aspect and Sunshine.

I am planting some Pæonies, and thought of putting them in north, south-west, and east positions, but have been told it is useless putting them where they have the early morning sun (say, before nine a.m.), as the sun dries up the buds. Will they do fairly well in partial shade, or do they like a great deal of sunshine?

The finer kinds, and the "Tree" or Moutan varieties in particular, always succeed best on a western aspect, where the sun does not catch the buds in the early morning in spring. But the commoner kinds will often do well on other aspects, such as south-west, east, or even north, provided that the plants receive a moderate amount of sun in the summer; all the Pæonies enjoy a fair share of sun.

Buds Drying-off.

I have a Pæony, which comes into bud every year, but never blooms, as the buds dry off just before they start to burst. Can you suggest anything to prevent this?

Your plant wants "waking up" a little. Water it two or three times with a solution of nitrate of soda or sulphate of ammonia, one ounce to the gallon, and put a good mulch of half-decayed manure over the roots every spring. Perhaps the buds get frost-bitten.

Cultural Directions.

Will you inform me how to cultivate Pæonies successfully? Must they be manured well, and what kind of soil suits them best?

These plants are by no means difficult of cultivation, and, as a rule, succeed well with very little trouble when once properly planted. A deep, mellow, loamy soil, into which a good dressing of half-decayed manure has been worked, suits them best, but they are not at all particular, and will grow in almost anything. If the soil is light and dry, give liquid manures.

Depth to Plant.

How deep should the roots of Pæonies be planted? Should the shoots be just above or below the ground?

Plant with the crowns two or three inches below the surface. In the case of the Tree varieties, the point of union (grafting) should be just buried.

Growths from Stock or Scion?

My Tree Pæonies are throwing up shoots from below the ground, and I should like to know whether they come from the stock. In appearance, they are exactly like the proper shoots. I cannot see the place where the scion was grafted, and so am unable to tell whether these shoots spring from above or below it.

We have never known the Tree or Mountain Pæonies to produce growths from the stock, and, as the new shoots resemble those of the scion, they are in all probability "true" to the variety. If the plants were put in at all deeply, this is almost sure to be the case.

Moving an Old Plant.

I have an old Tree Pæony, which is completely covered by a large bush. I do not want to cut this back, as it would spoil it. Would it be safe to move the Pæony in the autumn?

It would certainly be possible to move the Pæony, and it would most likely do better away from the hungry roots of the bush. Take it up with a good ball of soil about the roots.

Position Unsuitable.

Can you tell me why my Chinese Pæonies always turn rusty and shrivel as soon as, or before, the flowers are over? They are in a border by themselves. They do not flower very well, although the soil is rich, good loam, but they do not get very much sun after 11 a.m.

If the soil is deep and rich, as you say, the plants ought to do better than this. The only other explanation of the failure is the aspect—Pæonies seldom do much good on an east aspect, as they greatly dislike the hot morning sun, especially after a cold or frosty night, and, as a rule, succeed much better in a position facing the south-west, or west. Try removing some of them.

Potting Herbaceous Pæonies.

Can roots of the herbaceous Pæonies be obtained in March, and planted in pots to flower in a cold, shady house the same year, or would Tree Pæonies be more suitable for this purpose?

Good clumps of the herbaceous Pæonies, if taken up carefully and potted might do well, but they would require large pots, and the roots should be disturbed as little as possible. The Tree Pæonies might be obtained already established in pots. It would be rather late to take them up from the ground,

and might give them a check which would prevent the flowers developing properly.

Pruning not Required.

Is it advisable to prune Tree Pæonies? If so, when?

Pæonies need very little pruning, as a rule; but it is usual to trim them up a little after flowering, in order to keep them in shape. When they attain an unwieldly size they should, of course, be headed back severely.

Raising from Seed.

Can you give me any hints of the method of growing the herbaceous Pæony from seed?

Sow the seed—which should be quite fresh—thinly in a box of light, loamy soil, four to six inches deep, and place it in a frame or cool greenhouse (a window will do), keeping the soil just moist. The plants may remain in the box for the summer, keeping the soil fairly moist, and next spring, as soon as the roots begin to grow again, plant them carefully out of doors, in a bed of deep, rich soil, at about one foot apart; from hence they may be transplanted, in due course, to their flowering quarters.

Stems Spreading too Much.

I have several Pæonies in a border which sprawl and cover up other flowers that are coming out. Will it injure the Pæonies to cut them down when they have finished flowering?

If the plants must be cut down, wait till the foliage has died off—it would be cruelty to do it before. If the stems spread about too much, why not tie them up?

Striking Cuttings.

Will you advise me when and how to take cuttings of an old Tree (Moutan) Pæony?

The autumn is the best time to strike cuttings of this plant. They should consist of young sideshoots just getting a little firm at the base. Insert them singly in small pots of sandy loam, with a little leaf-mould, if possible, and stand the pots in a frame, or under a handlight.

When to Divide.

Can you tell me which is the best time to divide and plant out some Pæonies?

Pæonies may be divided and replanted either in the autumn or the early spring, but when the soil is fairly light, the former is probably the better period.

PALMS.

Dormant Plants.

I can never obtain success with my Palms. They do not grow any more after I get them from the florist, and yet seem to be quite alive, and green. I have them in my sitting-rooms. Is there anything you can suggest?

It is a frequent occurrence that Palms remain dormant for a considerable time after they come from the growers. Many over-water them. They like a moist atmosphere, but not too much water at the roots. Much depends upon the sorts. The Kentias are among the best for the house.

General Treatment.

I have two Kentia Palms, and wish to rear them in a room which is only used occasionally, therefore the temperature does not vary very much. Is any special treatment required, as to liquid manure, etc.?

Kentias require much the same treatment as other Palms. It is not necessary that the temperature should vary to any extent, the chief thing being to prevent it falling too low at any time, and to keep dust, cold, draughts,

and a very dry atmosphere away from the plants. Very little stimulant is required in the winter, as a rule, a little very weak soot-water or some lime-water being quite sufficient, but during the summer, nitrate of soda, half an ounce to the gallon, may be given every two or three weeks.

How Often to Repot.

Will you inform me if Palms need repotting every spring?

Large plants need only be repotted every second or third year, their vigour being maintained by the use of liquid manure. Young or small plants, however, are the better for a move into slightly larger pots each spring; and whenever the soil becomes sour, through over-watering, or any other cause, and the roots unhealthy, repotting should always be practised.

Leaves Shrivelling.

I have a Palm on which there are five leaves. One has just been taken off because of being shrivelled; the other leaves, particularly one not quite unfolded, also appear to be affected. Can I do anything to prevent further deterioration?

The plant has probably received a chill, or check of some kind, or it may have been under or over-watered. It frequently takes very little to "upset" these really tropical subjects. They are too often sold directly out of the high temperature in which they have been grown, and are sure to show the effects, sooner or later. Nothing can be done, except to water the plant (using tepid water) very carefully, and sponge the leaves once a week. Its recovery is doubtful.

Pot-bound Plants.

I have two Palms (*Chamærops excelsa*) in my dining-room. They are about three feet high, standing in 5-in. pots. The leaves are turning brown at the tips, whilst one seems to be drooping slightly, and the roots are forcing themselves on top of the soil. I should be glad to know if it is safe to repot them now (September).

These plants ought to have been repotted before; it is too late now, and they must be left till the spring. As the pots are so full of roots, water should be given rather freely; and a very little soot and guano dissolved (separately) in the water, and given occasionally and alternately, will be found very beneficial. Sponge the leaves gently with tepid water once a week. The discolouration of the leaves cannot be helped—it is the result of the starvation at the roots.

Remedy for "Mealy-bug."

What is the right treatment for a large Palm which has developed white parasites on it? The point, also, of the new frond, which is forming, seems to be fading. The plant has been well sponged with warm water with no good effect.

This is probably the insect known as "mealy-bug"; just touch each cluster with a small brush dipped in paraffin, keeping it off the plant, and some time afterwards brush the affected parts clean with a solution of soft soap (two or three ounces to the gallon), with a little paraffin added. The fading of the point of the new frond is a consequence of the plant being out of health, and cannot be prevented. Water the plant very carefully, and repot in May.

Scale on Palms.

I notice that my Palms have a sort of scale on them. I have syringed them, but it has been of no avail. Could you tell me what to do?

The best remedy for this insect is to sponge or brush the affected parts with a thick lather of soft soap, with half a small wineglass of paraffin to each gallon. In about a week, scrape or rub all the insects off, and give another dressing of the same, but not so strong.

Separating Kentias.

A short time back I bought a Kentia Belmoreana, over three feet high. There seem to be three separate plants. Is it advisable to separate them, as the roots are coming out of the bottom of the pot, or would you recommend the repotting into a larger size?

If you have a well-heated greenhouse, or can plunge the plants in a hotbed, under cover, it will be advisable to separate your plant, as proposed; but if it is only kept in a window, or room, it would be too risky, and should be left alone. April would be the best time for this, but if merely repotted (which had better be done), May would be better. Use a nice, light, loamy or peaty soil, with some leaf-mould and sand, and give free drainage.

Short Stalks.

Can you tell me the reason the new leaves of a Palm which I have had four years are all so short in the stalk? The first leaves were of a nice, graceful length, but each new one now is short. It has been repotted once—about two years ago—but that did not make any difference.

It is want of heat that makes the leaves come with short stalks. These plants are usually grown in a high temperature, crowded together, and in heavy shade, and this draws the leaf-stalks up, but in the cool atmosphere of a room they become shorter. Perhaps the plant requires a little liquid manure of some kind.

Syringing or Sponging?

Is it right to syringe Palms in an ordinary conservatory? I have been told that they ought only to be sponged, as water gets into the heart, and may rot them.

These plants may and should be syringed to a moderate extent in a cool conservatory during hot weather, but not in the winter—sponge the leaves occasionally instead. A great deal depends upon the temperature. In the warm houses in which they are grown in market gardens, they are syringed frequently, and atmospheric moisture is also maintained by damping down the paths, beds, etc., regularly.

Unhealthy Plants.

Can you inform me how to improve a Palm, which stands about two feet six inches high, and has only two leaves on, one having previously withered away. I put guano on it, and repotted it some time ago, but it is absolutely at a standstill.

It is extremely difficult to bring a Palm round into good health again when it has got into the condition described. What it really requires is to be placed in a stove, and receive the usual treatment, for about twelve months, when it might pull round, but it is doubtful whether it is worth the trouble. You may try the effect of two or three waterings with weak lime-water, to sweeten the soil, afterwards giving a dose or two of sulphate of iron, half an ounce to the gallon; but if this has no effect, better throw it away.

PAMPAS GRASS.**Best Position.**

Which position will suit Pampas Grass best—among trees, a shaded swamp, or a very sunny lawn, with no shade?

This handsome subject enjoys an open and sunny position, but where the roots can penetrate to a constantly moist stratum beneath the surface, such as near the margin of a pond or stream.

Centre-piece for a Lawn.

Would you kindly let me know the best way to grow Pampas Grass? I want one for the centre of a lawn.

The simplest and best way to accomplish this object is to obtain a young

plant, preferably in a pot, from any good nursery, and plant it out in light, deep soil, in the desired position in the spring.

Moving a Clump.

Can I move a large old clump of Pampas Grass as soon as it has flowered, without injuring it? Is there anything special I ought to do when moving it?

Yes, this may be done either in autumn, or in the spring. All that is necessary is to take the plant up with a good ball of soil, and water it in well, if the ground is dry.

Propagation from Seed.

Can you tell me how to sow Pampas Grass, and mode of treatment?

This subject is usually increased by means of division, as raising from seed is a rather tedious process. The seed should be sown in a gentle hotbed, pricking off the seedlings as soon as they can be handled, and planting them out when strong enough.

Treatment after Flowering.

Will you inform me what to do with a Pampas Grass during the winter? Is it best to cut it down, or leave it till the spring?

This plant should not be cut down at any time. You may remove some of the old, loose, dead leaves in autumn; but leave it alone, as far as possible, until the spring, when it may be trimmed up rather closely, but not be cut down. The foliage acts as a shelter to the roots in winter.

PANSIES AND VIOLAS.

Cutting-down after Flowering.

After Pansies and Violas have bloomed the first time, can or should they be cut down, and how low, for blooming the second time the same season?

When the flowers become small and poor, cut the plants right back to the soil, and they will soon push up a number of shoots from the base. These should be thinned out well, and, if a top-dressing of leaf-mould or rich soil is given, they will bloom almost as well as ever again.

Distinction between Pansies and Violas.

I should like to know the essential qualities which go to make up a Pansy as opposed to a Viola, or, in other words, "What is the difference between a Viola and a Pansy?"

There is no essential difference, botanically or structurally, between the Pansy and the Viola—it is entirely a matter of habit. The Pansy makes strong shoots, and produces a few large blooms, while the Viola makes a dwarfer, more bushy growth, and produces a large number of comparatively small flowers. The latter has been obtained solely by selection and seeding from the finest types, and by some authorities is termed the "Tufted Pansy," a much more correct designation, as the word "Viola" really includes the Violet and several others.

Exhibition Blooms in Pots.

I wish to grow very large exhibition blooms of Violas in pots in the greenhouse. Can you tell me if they will grow thus, and how to obtain large blooms?

Unless the greenhouse is very low, light, and airy, you will not meet with much success in growing Pansies or Violas in pots in it. In an average greenhouse the plants become drawn and weak, and the blooms small. But, if you have a low pit or frame, in which the plants could be grown, standing them on ashes, they would be more likely to succeed, as the lights could be drawn right off in favourable periods, and only replaced (white-washed) during hot sun or heavy rains, or on cold nights. The way to

obtain large blooms is to use a rich, loamy compost, keep the roots moist, and feed them well when the pots are full of roots and the buds rising, and these must be thinned a little if at all numerous.

Flowers Changing Colour.

What is the cause of Pansies changing their colours? Several of mine opened in the spring with two petals lavender, and the remaining petals blue, but in the early autumn they were all blue.

This will occur occasionally, and it is chiefly due to the season. Some flowers come of quite a different colour in the autumn.

Futility of Layering.

I have been pegging down the lanky shoots of my Violas—stripping the lower parts of the stem and pegging them down without slipping them. Should I have treated them in the same way as Pinks and Carnations.

It is a waste of time to attempt to layer these plants—cuttings (or seed) being by far the best means of propagation. The right way, where increase is wanted, is to cut away all these long, flowered shoots towards the end of the summer, and utilise the small, wiry shoots from the base for cuttings.

Hybridising.

Will you give particulars for the whole process of hybridising Pansies, as I should like to raise a new one?

All that is necessary is to transfer, by means of a small camel-hair brush, or some similar implement, the pollen from the flowers of one plant to the stigmas of the other parent, and if this is done at the right point, that is, when the flowers are fully expanded, it is pretty sure to "take." Pansies seed very freely, as a rule, but care should be taken that they do not become self-fertilised. Of course, there is no harm in trying, but there are now so many fine varieties of this flower that we fear it will take you some time to obtain a really new or distinct form.

Insects cause Failure.

I inserted a number of Pansy cuttings last August. They have now started to droop and wither, and on examining the base I find coiled round each small white worms (largest about a quarter of an inch). Are these worms the cause of the plant drooping?

The insects referred to are doubtless nematoid or eel-worms, caused by a sour or unwholesome state of the soil, and are accountable for the failure of the plants. The best remedy is quicklime; if the soil is dry, water it twice or thrice with a strong solution, or otherwise dust it freely among the plants occasionally.

Late-sown Seed.

Will Pansies sown in March bloom in the summer, or would you advise me to get some small plants?

Yes, plants from seed sown in March, and kept growing on steadily, will commence blooming in July or August, and continue until frost comes. If you want early bloom, procure some small plants, by all means.

Preserving Choice Plants.

I have some very good Pansies now in bloom, some of the flowers measuring four inches across, and am anxious to preserve the plants and keep them from deteriorating. Should they be moved, or cuttings taken?

Cuttings of these plants should be taken when the best of the blooms are over, towards the end of the summer. Take the small, wiry shoots from the base of the plants, which have not bloomed, and insert them firmly in sandy loam, in a frame, or under a hand-light, if possible, or on a shady border.

Propagating Named Varieties.

I should like to sow some seed of Pansies and Violas. Would you let me know the best sorts to grow?

You can obtain seed of these plants in distinct colours, such as white, yellow, purple, etc., but of few, if any, named kinds, and even these would not come quite true. If you want to grow named kinds, you must obtain cuttings.

Replanting in Spring.

Some Pansies which flowered last autumn have stood out all the winter. Would it be wise to replant them in February or March?

Yes; these had better be replanted, or else cut back and top-dressed with rich compost, preferring the former course.

Size of Flowers.

Will you tell me which are the best, Violas or Pansies? Which bears the largest flowers and has the best colours?

Both these subjects have their good points—there is no “best.” The Pansy, however, produces the largest flowers, but does not bloom so freely as the Viola. There are a number of varieties (named) of various colours, and many of them are very beautiful.

When to Sow Seed.

I have gathered seed from Pansies and Violas. When may I sow the same, to be of service next year. The seed has been slowly dried in a greenhouse.

July is the best time; but if sown later in a frame, you may get plants forward enough.

Wintering Young Plants.

I wish to raise Pansies and Violas. Most kinds last the winter in the open air here, but I have been told that it is only the old plants that survive. What protection should be given to the young plants?

Young plants will live through the winter as well as the old ones, if sturdy and healthy, but in very severe weather it might be as well to throw a little litter or straw over them.

PASSION FLOWERS.**Autumn Pruning.**

Is the common, hardy Passion-flower improved by cutting-back in the autumn?

Yes, when the plant becomes too large, or overgrown; but in pruning the Passion-flower be careful not to cut away all the young shoots, as these will bloom early the following season.

Bareness of Base.

I have two blue Passion-flowers; they are bare of foliage except at the top, and are in a cool greenhouse. Should I cut them down, and when?

This all depends upon how the plants are situated and trained. The Passifloras are always liable to become bare at the base, but when trained over the roof, or to lofty pillars, this is no great disadvantage. Cut them down if necessary, by all means, the best time (under glass) being during March, but they may probably soon become bare at the base again.

Buds Dropping.

I have a Passion-flower in my greenhouse, which was coming along splendidly until about three weeks ago, when the buds began to turn colour and then fall off in dozens. It is well ventilated, and gets a good amount of sun. Can you enlighten me as to the cause?

There is something wrong at the root of this plant, and, in all probability,

it is too dry. Give it a good soaking of either plain water or weak liquid manure. Plants of this kind require a lot of water when in full bloom, especially where the soil is of a light description, or freely drained.

Fruit on Plant.

My blue Passion-flower this year is covered with Plum-like fruits, and I shall be glad to know if these will be of any use beyond that for decorative purposes?

The deep yellow or orange-coloured fruits of *Passiflora cœrulea* are of no value except as yielding seed. If, when ripe, they are cut open and dried, or the seed washed clean in water and then dried, this will grow freely in a gentle warmth in the spring. There is an edible-fruited species—*P. edulis*—but this is not hardy.

Grossness causes Failure.

Two seasons ago I purchased a young Passion-flower, and planted it against a wall facing south. Each year it has produced a lot of wood but no flower. Can you inform me how to proceed to get it to flower?

The soil is probably too rich, and possibly too loose as well; see that it is made quite firm, and give no manure. Beyond this, the plant had better be pruned rather severely—say, in April—to get rid of the gross, crowded wood, when it will probably flower later.

How to Take Cuttings.

I have a very fine Passion-flower (blue), six years old. Can I take cuttings from it, and, if so, how and when?

The best time for taking the cuttings is in the spring. They will root freely on a hotbed, or they may root in a cold frame if kept close and shaded. They should be made from half-ripened wood; cut away the soft tips, and make the cuttings with lengths which have about three leaves. Cut off close below a leaf, and remove the lower leaf. Put them in light, sandy compost, and water sparingly.

Pruning Overgrown Plants.

I have two Passion-flowers (*Passiflora*), *cœrulea* and *Constance Elliott*; they are overgrown. When should they be pruned, and how?

These should be pruned in the spring, when they begin to grow a little again. Cut back the long shoots to any reasonable extent, but if you want early bloom, you must leave some of the young shoots formed last year. If cut back closely every spring, they will only bloom late in the season.

Removing an "Untidy" Plant.

I have a Passion-flower on a wall which I want to remove, owing to its untidy growth. When would be the best time to do so?

If properly pruned, the Passion-flower ought not to be "untidy," though, of course, a moderate number of drooping shoots are unavoidable. The best time to move this plant is at the end of April, or in May.

Treatment of Seedlings.

Two years ago I raised blue Passion-flower plants from seed in a cold house facing south, in a 12-in. pot, placed on the staging. They (about six plants) made a lot of wood the first year, but last year very little; only the main stems grew to the thickness of one's little finger. I did not repot them, but gave a manure dressing. They are still in the same position, and have been kept dry during the winter. Should they bloom this year?

This is not the way to grow the Passion-flower. It must be planted out, singly, in a well-drained bed of light, loamy soil, or, at the least, be turned out into a good-sized box of suitable soil. The seedlings had better be

potted off singly as soon as they show signs of returning animation, and then be planted out as above, or at the foot of a south wall or fence, in May. If thus treated, the strongest will probably bloom this season, if rather late.

PELARGONIUMS.

Culture.

Are Geraniums and Pelargoniums Identical?

What is the difference between Geraniums, Pelargoniums, and Zonal Pelargoniums?

There is a deal of confusion in the nomenclature of these plants. The true Geraniums are hardy herbaceous plants; but the name is frequently given to the ordinary varieties of the Zonal Pelargonium, which are so extensively employed for bedding, as window plants, etc. All the half-hardy "Geraniums," so-called, are really Pelargoniums, and belong to the "Zonal" section, but the term Pelargonium is usually applied only to the large or Azalea-like flowering kinds, which form a quite distinct class. All, however, except the hardy herbaceous species, are really Pelargoniums.

Cutting down Straggling Plants.

I have named Zonal Geraniums, saved in a cold greenhouse through the winter. They have run up very tall and scraggy, about eighteen inches or two feet; the tops are good, but the stems bare. Will you kindly advise?

These plants must be cut down, making the stems and tops into cuttings, and inserting them in pots of sandy soil. If placed in a sunny position, and kept almost dry at first, very few will fail to root and form nice little plants.

Difference in Varieties.

What is the difference between Show, Regal, Spotted, and Decorative Pelargoniums? To get say two dozen of the best varieties for June flowering, should the selection be made from any one kind, or from all of them?

The difference lies chiefly in the markings of the flowers, but the Regal varieties have more than the usual five petals. If you want a representative collection, you should get some of each, but the Decorative, Regal, and Show varieties are the most useful, as a rule.

Flowers Changing Colour.

I have a Geranium which bears flowers of a rich salmon colour, and have taken cuttings from it. The flowers from the cuttings, however, are nearly white. Can you tell me how to get the colour back again?

There must be something wrong with the soil in which the young plants were potted—they ought to produce flowers of the same colour as the parent plant. Try the effect of two or three waterings with soot-water (weak and clear), or a solution of sulphate of lime, half an ounce to the gallon.

Geraniums and Roses.

Will you tell me if I may plant Geraniums round my bush Roses, and, if so, how far they must be away?

You may plant the Geraniums up to within a full foot of the Rose stems, but it will depend a little on the size of the Roses; there should be a clear space between them and bedding plants.

Pegging-down Ivy Geraniums.

Would Ivy Geraniums be effective, and grow well, pegged down in a bed to make them creep? How is the pegging done?

Yes; these make a pretty bed, and, in a light, loamy soil, not too rich, do extremely well. The shoots are simply fastened down to the soil, here and there, with hooked wooden or metal pins.

Preparing Specimen Plants.

When should Geraniums be cut back for specimen plants for the month of August?

If the plants are loose and straggling, they may be shortened back, but we do not recommend cutting-back. With ordinary plants it will only be necessary to pinch the tips out and tie the shoots down, and they will soon fill up the centres with new shoots.

Regal Pelargoniums after Flowering.

After flowering, should Regal Pelargoniums be cut down? Cannot the plants remain as now, so as to produce bigger plants next year?

Of course, these plants must be cut down after flowering—if not, they will make enormous bushes by next year, much too large for a small house.

Removing Dead Leaves.

Should the tiny leaves growing up the sides of the stem of Zonal Geraniums be taken off, as well as the leaves when they turn brown? I have otherwise healthy cuttings and old plants, grown in a window, but these tiny leaves turn brown and spoil the appearance.

The "tiny leaves" referred to are the stipules; they always die off after a time, especially as cold weather comes on, and should be removed, as they are apt to harbour damp and cause decay.

Repotting and Cutting.

I have a double white Geranium which flowered profusely, and grew over two feet in height. From the root, another young plant began to shoot up, so in autumn, as some of the leaves began to turn brown, I repotted it into a 7-in. size, and also cut the tops off about half-way down, leaving young shoots which were still growing. Have I done right, and will the Geranium flower next year?

It is very bad practice to repot and cut down a plant of almost any kind at the same time, and it might have cost you the plant. The proper course is to cut it down first, wait until it has well broken into growth again, and then repot. Geraniums flower every year, if healthy, often for several months at a stretch.

Standard Plants.

I am told it is possible to train Geraniums as standards. If such is the case, will you give me a few hints as to culture?

Geraniums (Zonal Pelargoniums) may certainly be grown in the standard form, and are extremely effective, while they are not at all difficult to grow. Any fairly strong-growing variety will be found suitable. Strike strong cuttings, and train them up to a single stem apiece, potting them on as required, until the desired height is reached, when they should be stopped, training out three or four of the topmost "breaks," and stopping these again until a good head has been formed. Seedling plants make good stocks, but these have to be grafted in a warm, close house in the spring.

Stems of Cuttings Rotting.

I had two cuttings from very good Regal Pelargoniums, which came on very well till about a month ago, when one turned black in the stem. I cut it below the black mark, and tried to strike the piece after cutting out the black, but both it and the root piece have all gone black and died. The other one has gone soft—even the young leaves hang down. They have been kept in a greenhouse which has not been below thirty-five degrees. Can you tell me the reason?

This affection is commonly known as the black rot; it is generally caused by careless or over-watering. Keep the other plant fairly dry and warm, and do not repot it until it is growing freely again.

Suitable Compost.

I shall be glad if you can give me some information as to what soil Geraniums do best in.

Geraniums succeed best in a compost of good loam, with about half the quantity of well-decayed manure, or leaf-soil, a little bonemeal, and a dash of coarse sand.

Temperature for Winter Flowering.

Will winter-flowering Geraniums flower in a cold conservatory in the winter? I have a stove to keep out frost.

No; a temperature of at least forty-five to fifty degrees at night, with a slight rise during the day, and all the light and sun possible, is necessary to enable these plants to bloom at all freely.

Worms in Pots.

My Show Pelargoniums are drooping, and the leaves turning yellow. The drainage of the pots is all right, but I find the soil is infested with tiny white worms. Are these worms the cause of the trouble? If so, what can I do to destroy them?

There is no doubt that the worms (threadworms) in the soil are the cause of the plants failing. They must have been in the soil used for potting, which ought to have been baked or roasted if there was any doubt about it. All that can be done is to give the plants two or three doses of strong lime-water, which will clear the worms out; but the plants cannot be expected to do much good for a time.

Propagation.**Cuttings, and How to Take Them.**

Will you tell me how and when to take cuttings from Geraniums?

Almost any bit of a Geranium, whether tops or sideshoots, three or four inches long, will strike if the lower leaves are trimmed off, and the cuttings inserted firmly in either pots or boxes of sandy loam, with free drainage. This is usually done in the autumn, during the early part of September, and the cuttings may be allowed to remain in a fairly-sheltered, sunny spot in the open air, as long as the weather remains fine and warm, then house them. Cuttings may also be struck in the spring (under glass), or in the summer in the open ground.

Drying the Ends of Cuttings.

In taking Geranium cuttings, should I allow the cut end of the stem to dry before inserting the cutting in the mould, or put it in immediately on taking it from the parent plant?

These had better be dried a little, though it is not really necessary, before insertion, but do not let them flag.

Growing-on Seedlings.

I have some Zonals from seed which are now plants six inches high. Should they be allowed to grow on, increasing the size of the pot when necessary, or should they be pinched, to form a bushy habit?

Yes, grow the plants straight on, without any check, and pot them on, as required, until 5-in. pots are reached, in which they will bloom. Do not stop them at all, but let them run up, and when a certain height is reached, they will branch out, and just beyond this a truss of bloom will be produced.

Raising Seedlings.

Will you tell me the proper time for sowing the seed of Zonal Geraniums; also give a few hints on raising them successfully?

Sow the seed in the early spring—in February or March—in a gentle heat, placing them singly an inch or so apart in boxes. When the plants begin

to touch each other, transfer them singly to small pots (2-in. or 2½-in.), using any good, loamy soil, with some leaf-mould and sand. In due time move them on into larger pots.

Striking Cuttings in the Open.

When is the best time for taking Geranium cuttings, grown in the open ground, and what is the suitable compost in which to strike them?

Much the easiest method of striking the cuttings of these plants is to insert them in the open ground during the first half of August, and take up and pot the plants before frost. All that is necessary is to dig the bed over well, adding a little leaf-soil if at hand, and placing a little sand in the bottom of each hole made by the dibber, for the base of the cutting to rest on.

Temperature for Cuttings.

Is fifty-five to sixty degrees too much for Geranium cuttings?

The temperature named is not too high to strike the cuttings in, though five degrees less would do nearly as well.

Wintering Cuttings in a Cold Frame.

I took some Geranium cuttings recently. They are doing very well, but I would like to know whether they can remain safely out of doors in a sheltered place, under a glass frame with matting over it on frosty nights?

It is very seldom that Geranium cuttings come through the winter successfully in a cold frame; even if frost is excluded, they usually suffer badly from damp.

Winter Treatment.

Buds turning Yellow.

How is it that the buds on winter-flowering Geraniums, following on those in bloom, should turn yellow as soon as they appear? I only water them when they really require it. I may say that I keep the temperature at fifty degrees at night and sixty in the day.

There must be something wrong for the buds to wither as described; with the temperature named, healthy plants ought to go on flowering continuously, expanding almost every bloom. Have the plants been properly prepared by keeping all flower-buds picked off during the summer, etc.? Perhaps the liquid manure given has been too strong.

Cold House not Safe.

Will Geraniums live through the winter in a cold house, if kept in pots?

These are never safe unless the frost can be just excluded by some means; they will stand a few degrees of frost for a short time, if in a fairly dry condition, but it is better kept out. The pots form no protection, and are liable to split under the influence of frost.

Disadvantages of a Cold Frame.

I have a good many Geraniums, which I should like to winter out of doors, as I have no room or place indoors to keep them. If I were to make a good-sized cold frame, would I be able to keep them through the winter in this way?

Geraniums cannot be wintered out in the open air in this country, and any attempt to bring them through in a cold frame usually ends in failure, damp being as injurious as frost. If you could heat the frame slightly, by running a small pipe, heated by a proper oil or gas boiler, round it, you would easily succeed.

Manuring Winter-flowering Plants.

Should Geraniums in full bloom at Christmas be given any liquid manure or a fertiliser?

If the pots are well filled with roots the plants may be watered with liquid manure once or twice a week, but the liquid must be both weak and clear; or a sprinkling of a good fertiliser may be given on the surface of the soil once every three or four weeks, pricking and watering it in well.

Plants in a Bedroom.

I have taken up some Geraniums, and put them in boxes on top of a cupboard in my bedroom. Will this be at all injurious to myself or the plants?

This is not a good place for the plants, which ought to have more light and air—a sunny window would be much better. You need not fear any ill-effects yourself, however, as growing plants have a tendency to purify the atmosphere rather than otherwise.

Pruning Inadvisable.

Should Geraniums be pruned for the winter after being taken from the garden?

No; it is not advisable to cut back these plants to any extent in the autumn, as they are liable to suffer. The lower leaves may be removed, but do not cut back the tops more than can be helped.

Unwelcome Growth.

My Geraniums are wintered in a greenhouse, which is always heated to a minimum of forty degrees. The plants develop new leaves during the winter, each dying as it grows large. Should they be kept in the dark to enforce rest?

The Geraniums making so much growth during the winter seem to indicate too much warmth, water, or both, being afforded. They should be kept on the dry side, and growth prevented, as far as possible. Do not keep them in the dark by any means.

Watering Greenhouse Plants.

Is it advisable to give a little water occasionally to Geraniums in the greenhouse during the winter?

Certainly, if the weather is mild. Although it is quite right to keep these plants on the dry side during the winter, the soil should not be allowed to become dust-dry at any time.

Wintering in a Cellar.

Is it a fact that old Zonal plants can be kept through the winter by shaking all soil from them and hanging them up in a frost-proof cellar? They are good named sorts, which have been out all the summer and made a lot of wood, and also flowered very well.

It is certainly true that strong old Geranium "stumps" are occasionally treated in this manner, and sometimes survive, but we should not care to treat choice varieties in such a barbarous fashion—they will do far better if placed in comparatively small pots, with a little fresh soil, and watered as required.

PENTSTEMONS.**Cultural Directions.**

Please say how best to manage Pentstemons. Some left in a sheltered bed last winter died.

The management of Pentstemons is exceedingly simple. It is only necessary to put out healthy young plants in any good soil and a fairly sunny position towards the end of April, or at any time during May, when they

will bloom profusely during the whole of the summer, with little or no further care or attention. They are not perfectly hardy, and old plants, however vigorous, seldom survive the winter in the open air, even in a sheltered position.

Cutting Down Old Plants.

I left some Pentstemons exposed all through the winter, but they are sending out new shoots at the base, and all up the old broken stems. As these latter look very untidy, shall I cut them down, or will the new growths displace the withered leaves?

Yes; cut the old stems down, and the plants will break up freely from the base. You are fortunate to have brought them through the winter so well.

Cuttings, and How to Take Them.

Can you tell me the best way to take cuttings of Pentstemons?

Cuttings (formed of any young sideshoots, three or four inches long) should be taken off and inserted in sandy soil towards the end of September, or in October, in a cold pit, a frame, or under handlights. Keep them just moist and rather close during the winter, and, when beginning to grow in the spring, pot them singly, and when established and strong plant them out as above.

Planting Out.

I have a number of small Pentstemons, at present in a cold frame. How far apart should they be planted, to make a good mass for cutting purposes?

To produce a good mass of bloom, the plants may be put out at twelve to fifteen inches apart. Pentstemons are not good plants for cutting, however, as the flowers wither very soon, even if placed in water at once.

Raising Plants from Seed.

I am thinking of growing some Pentstemons. When should I sow the seed, and will they flower as well from seedlings as from cuttings taken in the autumn?

Seedling Pentstemons flower very freely—quite as well as, if not even better, than those raised from cuttings. If the seed can be sown in February or March, in a warm frame or greenhouse, the plants will begin flowering in July or August, and continue till cut off by frost.

Wintering Seedlings.

I have many young seedlings of Pentstemons, sown in the spring in boxes, and planted out in June or early July. They are about three or four inches in height, with plenty of leaves. Should they be left in the border through the winter, or is it necessary to take them up and put them in a cold frame till spring?

The Pentstemons would be safer in a frame. They may be taken up in autumn, and bedded-in in the frame, but they should have the lights off on all favourable occasions.

PETUNIAS.

Cuttings or Seedlings?

I want to grow some good double Petunias. I have no artificial heat, but my greenhouse faces south, and is very warm. Is it possible for me to make a decent show, as I should like to have the pleasure of growing the plants myself?

It is quite possible to raise either double or single Petunias from seed, in a cold or unheated greenhouse; but as, in the absence of any artificial heat, it is useless to sow the seed before the end of March or beginning of April,

it is generally rather late in the season before the plants commence to flower. Beyond this, only a small proportion (usually twenty to twenty-five per cent.) of the seedlings of this subject produce good double blossoms. On the whole, we should advise you to obtain some small plants in April, and grow them on yourself.

How to Strike Cuttings.

I have some very fine double Petunias, and wish to take cuttings from them for next season. Will you please tell me how to proceed?

Cuttings consisting of the young sideshoots—each with a heel, if possible, and about two inches or more in length—may be taken at any time during the late summer or autumn. Insert them round the sides of $3\frac{1}{2}$ -in. or 4-in. pots, well drained, and filled with light, sandy soil; water them in well. They should be placed in a glass-covered box, or under a bell-glass, to strike, but do not keep them too close, or they may decay. When rooted, pot off singly, and winter them in a light, airy place, rather dry, but safe from frost. Cuttings may also be taken in the spring.

Inducing a Bushy Habit.

My Petunias are very forward and doing well. I have just potted some singles and doubles in $3\frac{1}{2}$ -in. pots. Should I now pinch the heads out? Both single and double are from seed.

Do not stop the plants directly they have been potted off, but wait until they are rooted out and beginning to grow again, when both the single and the double kinds should be "pinched" to induce a bushy habit of growth.

Pot-bound Plants Flowering.

It is advisable to grow Petunias in 4-in. pots, if they are fed each week with artificial manures, as I am told, by using a small pot, one gets larger blooms and fewer leaves?

If you keep the plants in small pots, you may get two or three fine blooms, but after that they will "run off," and become smaller and smaller, though, of course, the artificial manure would make a difference. Good plants cannot be grown in smaller than 5-in. or 6-in. pots, and then they require some amount of "feeding."

Raising from Seed.

Will you inform me how to grow double Petunias from seed, which I have set in leaf-mould and sand in a temperature of sixty degrees day and night?

The little plants should be pricked out into boxes of loam, leaf-mould, and sand, when ready to handle, potting them singly into small sizes (3-in. or $3\frac{1}{2}$ -in.) in due course. They may as well be allowed to flower in these pots, when those with double blossoms can be selected and potted on into 5-in. sizes. Take care not to overwater them in the early stages.

Training Specimen Plants.

I should like to show some double Petunias this year. Mine are at present a foot high, bushy, and in 5-in. pots. Should I stop the long "arms" of the plants, and take off all buds, or not? A few hints would be very welcome; the show is in mid-August.

The best way to train these plants is with three, four, or five main erect flowering stems, each tied to a neat stake. If there are many laterals, they should be pinched back, but not the others. As the plants are so vigorous, they may be moved into 6-in. or even 7-in. pots, and, in this case, more flowering stems should be allowed.

Treatment of Old Plants.

Will you inform me as to the treatment for Petunias which have bloomed well all the summer? I propose taking cuttings from them, but should like to save the old plants.

The old plants only need to have the supply of water gradually reduced

as the autumn draws on and they go out of bloom, and any long or straggling shoots should be cut back moderately in September. If mildew appears on the foliage, dust with sulphur. Old plants, however, are seldom as reliable as cuttings.

PHLOX.

Culture in Town Gardens.

I am anxious to fill my border with choice varieties of Phlox, but am told that they will not flourish anywhere except in the country. Is this correct?

As a rule, and with a little care, Phloxes do well in suburban gardens, and even in town gardens make a good show. Give the plants rich soil, with plenty of water, and an occasional syringing if the soil is light and the weather dry, and you should have no cause to complain.

Exhausted Plants.

What is the best thing to do with a row of Phloxes that are not doing so well as they did three years ago? They are in rich soil, and have a mulch of manure every autumn and spring, and I have reduced the size of the clumps every year. Should I take them up and replant?

We should advise lifting and replanting the Phloxes in fresh soil, or, at any rate, re-making the border in the spring. The failure is probably due partly, if not entirely, to the clumps having been reduced annually, as stated; in this way the strongest growths, which are always on the outside, are removed, and only the exhausted portion left. When replanting, use only the strongest portions of these, or procure fresh, young plants.

Pinching-out the Points.

Is it correct that the points of Phlox Drummondii should be pinched out when the plants attain the height of three inches?

No; do not pinch out the points of these plants at all, but let them grow and bloom naturally. If you want dwarf plants, grow the naturally dwarf or "nana compacta" varieties, or else peg the others down to the soil, like *Verbenas*.

Propagating Phlox Drummondii.

My Phlox Drummondii are blooming this year, and I should like to save the plants for next season. Will they live through the winter outdoors, or must they be taken up?

Many varieties of Phlox are hardy perennials, but Drummondii is a half-hardy annual, and must be raised from seed each year. Sow the seed in March in a gentle heat, and prick out when large enough to handle. Harden off in the cold frame until May, when they can be planted out. Seed can also be sown in the open border in April or May, and thinned out later.

Raising from Cuttings.

When is the best time to take cuttings of Phlox? If in the spring, will they bloom the same season?

The spring is the best time to take cuttings, and, if the young shoots are taken, struck in a gentle warmth, and grown on steadily, they will bloom the same season. Any young basal shoots on the plants may be taken off and inserted in a cold frame in autumn.

Soil for Seedlings.

What sort of soil is most suitable for seedling plants of Phlox? You will find a mixture of about three parts of fairly light loam, two parts of leaf-soil, and nearly a part of sand, will do nicely for these plants. If any manure is used, it should be very old and well-decayed.

PHYSALIS (Winter Cherry and Cape Gooseberry).**Culture of *Physalis edulis*.**

Will you please tell me the proper culture of *Physalis edulis*?

Sow the seed in a gentle warmth, rather early in the spring; prick the seedlings off into small pots as soon as possible, and when in growth again pot on gradually until 6-in. or larger pots are reached, in which they will fruit freely. They may also be planted on a sunny, sheltered border out of doors, or under glass. Give plenty of water and liquid manure while in growth. This plant, which is sometimes known as the Cape Gooseberry, is only half-hardy.

Planting Out and Repotting.

Will you let me know when roots of the Cape Gooseberry may be moved—in the autumn or spring? I have some in pots. When cutting the plants down when the fruit is red, should the roots be kept in the pots for another year?

The spring is the proper time to replant, or plant out from pots, seedlings of this subject. The roots can be kept over till the following year, and preferably in the pots, but you would find it more satisfactory to raise the plants from seed again.

Propagation of Winter Cherry.

As I have not been successful in raising good flowering plants of *Physalis Franchetti* from seed, I shall be glad if you can tell me another method of propagation.

These plants (also known as the Winter Cherry) may be increased by division of the roots in spring. Still another method is to pot up—in the autumn—the tops of the suckers which run under ground, each a few inches long, with rootlets. Winter in a cool greenhouse, and plant out about April.

Seedlings not Thriving.

Last year I sowed some *Physalis Franchetti*; they were pricked out about five inches apart, in a bed in the open, about May, but they did not do well. Do they want a rich soil?

These plants require a fairly rich soil; but by far the best way to grow them is to sow the seed where the plants can remain—they never do so well when transplanted, unless at a very early stage.

When to Gather.

I have several plants of *Physalis Franchetti*. When is the time to gather and dry them for winter decoration?

The spikes should be cut, with long stalks, as soon as the pods are full-grown and well-coloured.

PINKS.**Buds turning Brown.**

Will you tell me why the buds of Pinks are dying off before they bloom? They are all turning brown.

This is usually the result of poverty of the soil, or drought; the plants should have had some water or liquid manure while the buds were swelling. They had better be replanted in fresh soil in the autumn.

Characteristics of "Mrs. Sinkins."

Kindly say how to distinguish a Mrs. Sinkins Pink from other varieties.

Mrs. Sinkins is of a very pure white colour, heavily fringed and strongly scented, while the calyx invariably bursts badly on one side, letting the petals fall abroad.

Cross-Fertilisation.

Please tell me the best way to hand-fertilise Pinks to obtain seed for new varieties?

To obtain hybrid seed, fertilise the blossoms when fully expanded, carrying the pollen from one flower to another with a small camel-hair brush, and working it freely on the stigmas, which in the Pink are fine white or purple in colour, reflexed towards the points when ready for impregnation, and rough or hairy on the outer surface. This should be done on a fine, dry, and sunny day, and the flowers be kept dry in some way (such as covering them with a frame-light, supported on four uprights over them) in wet or even showery weather—at least until the pods have set and are swelling freely.

Dividing the Roots.

Please let me know the best way to strike garden Pinks.

Decidedly the easiest method of increasing any of the commoner kinds of the Pink is to pull a few old clumps to pieces about September, and plant the divisions, rather closely, in a bed of good, sandy soil, in an open position. Whether they have any roots or not when planted, nearly all will "get hold," and make good plants by the following summer, ready for planting out in the autumn.

Malformed Flowers.

Will you tell me what to do to prevent malformation in Pinks? Nearly all mine fail to open to perfection in consequence of a green heart.

This is a common fault with some varieties, but is generally due to over-luxuriance, or, in other words, to a too rich soil. Use a little lime, and make the soil quite firm. The season is often accountable for this kind of thing, to a certain extent. Lastly, if the first blossoms (which are usually the worst) are picked off directly they open, the later ones will come better.

Mrs. Sinkins Failing.

Will you tell me the reason of so many buds of Mrs. Sinkins Pink being blind? My plants are covered with buds, giving promise of quantities of bloom, but, after a few flowers have come out, the rest turn brown and come to nothing. Cannot the original root support so many? I like a large clump, and do not wish to divide them unless quite necessary.

This variety produces large and very full flowers, the development of which constitutes a great strain on the plants. Consequently, it is unable to bring many of them to perfection, except under the most favourable conditions. Your plants are evidently starved, or rather exhausted, and should be taken up, the ground well dug and manured, and vigorous young plants, obtained by means of cuttings or layering, be planted in place of the others. Liquid manure should also be given freely in dry weather, when the plants are coming into bloom.

Pinching-out not Necessary.

I have grown Japanese Pinks from seed, and put them into small pots for planting out or potting on. They seem to be getting rather straggling. Do these require sticking and tying, pinching back, or any special treatment?

It is not necessary to pot these plants singly, as they plant out quite well from boxes. Do not pinch them, nor put sticks to them, and they will do quite well.

Points of Show Pinks.

Will you tell me the points of a Show Pink?

The chief points of a Show Pink are regularly or well-formed flowers, with smooth, well-rounded petals, a clear ground-colour, and the edging or "lacing" well defined. The calyx must also be entire—not split.

Raising Biennial Varieties.

I would like to know how I may grow Pinks from seed, to flower outside this season.

Only the Indian or Chinese and Japanese Pinks (*Dianthus sinensis* and *D. Heddewigii*) will flower from seed sown the same season. The garden and show or laced kinds must be sown the previous season. Sow the former in March in a frame over a gentle hotbed, and prick off and plant out as soon as possible. If sown towards the end of April, on a warm border, they will bloom to some extent the same year, but not till late.

Saving Indian Pinks.

Is it worth while to keep Indian Pinks (*Dianthus*) for another season? Do they blossom as well the second year?

No, it is not worth while to keep these plants over till another year, for even if they did not die off in the winter, they would do very little good next season. Although usually treated as annuals, they are really biennials, and may be sown in the early autumn to flower the following season. They only bloom well once, like other biennials.

When to Sow Seed.

Can you tell me the right time to sow seed of Pinks, and what soil would suit them best? What are the best varieties?

To ensure the plants blooming the following season, May or June is the best time. Sow in a mixture of about two parts of fine loam, with one part of leaf-mould and half a part of sand, in a well-drained pan or box, and keep in a cool frame till the seedlings are strong enough to transplant. It is not often that seed of named or distinct kinds of Pinks is to be obtained—it is usually sold as "mixed."

PLUMBAGOS.**Absence of Blooms.**

I have a blue Plumbago trained against a wall of a small greenhouse, where there is a fair amount of sunshine. It has been there some time, and looks very well, but does not bloom. Will you tell me if pruning would be beneficial?

As a rule, this plant flowers freely in a fairly sunny position. Perhaps yours get too much water at the root, or the soil may be too rich. Keep it moderately dry for a time, and see that the soil is quite firm. The only pruning required at the blooming season is to thin out some of the weaker shoots, if numerous; but the plant should be cut back moderately each spring.

Buds Fall Off.

I have a Plumbago in a 5-in. pot, which has been in the garden all the summer, and, as it was showing plenty of buds, I brought it into my cool greenhouse about three weeks ago, to finish blooming. Now the buds are all dropping off. Can you give me any reason for it? The plant flowered splendidly out of doors.

Probably the change from the open air to the greenhouse was the cause of the flower buds dropping, though, if the plant was plunged in the ground, and had rooted out beyond the pot to any extent, the injury to the roots thus caused would account for the failure at once.

Essentials for Successful Growing.

What is the best plan to adopt to grow *Plumbago capensis* well? It is in a greenhouse.

Like all other subjects of a somewhat hard-wooded nature, the Plumbago succeeds best in a light, loamy soil—a compost of about two parts of loam,

with one of leaf-soil or peat, and some sand, is very suitable. This should be made as firm as possible without ramming, and the pots be rather freely drained, as they require plenty of water when in full growth.

Late Blooming Desired.

How should I treat a blue *Plumbago* that I have trained over a large wire frame? I want it to bloom at the end of September. Should I disbud it, and when?

It is very doubtful whether you will be able to bloom this plant at the time named; it flowers naturally rather early in the summer. All that can be done is to encourage a vigorous growth, stopping the strong shoots when one to two feet in length, and ripening these by means of full exposure to sun and air. Bring the plants indoors again in August, and they may break and bloom from the axils of the leaves below, though this is somewhat doubtful.

Need for Resting Season.

My *Plumbagos* stopped blooming three weeks ago, and the leaves are turning brown. I have them on a staging in a greenhouse, with a fire—should they be kept dry and resting?

It is natural and right for *Plumbago capensis* to go to rest after flowering, but not being truly deciduous it should not be allowed to become too dry at the root—keep the soil just moist, and the temperature between forty and fifty degrees.

Size of Pots.

I have recently put a small plant of *Plumbago capensis* into a "forty-eight" pot. Is that size suitable?

This depends upon how small the plant is. If six inches or more in height, with plenty of roots, a "forty-eight" (5-in.) pot would not be too large, provided the soil were moderately light, and the drainage free. If only three inches or so high, and somewhat delicate, a 3-in. pot would have been better. Good plants may be grown in 5-in. or 6-in. pots, but larger specimens in 7-in. to 9-in. sizes are more effective. When planted out in a light and fairly sunny greenhouse or conservatory, and trained to a wall or pillar, this delightful plant is seen at its best.

Striking Cuttings.

I have a large *Plumbago* in a pot, and have tried to strike cuttings, but without success. Would you give me some information as to the best method?

Cuttings of this plant are easily struck during the spring and early part of the summer. Healthy sideshoots, about three inches long, make the best cuttings, though fairly strong tops may be used, but these may have to be a little longer. Trim and insert them very firmly in well-drained pots of light, sandy soil, such as a mixture of equal parts of loam, leaf-soil, and sand. If taken in the spring, they require a hotbed, but in May or June they will do well in a deep box in the greenhouse, covered with glass. Keep shaded, fairly close, and moist till rooted.

When to Prune.

When is the proper time to cut back the *Plumbago*?

The *Plumbago* may be lightly trimmed into shape after flowering, if necessary, but should not be thoroughly pruned until the spring, when the new growth is commencing. It will stand fairly hard pruning.

Wintering Out of Doors.

What can I do with a *Plumbago* growing on a sheltered wall facing west? Would it winter in the open, as I have no greenhouse?

It is doubtful whether this plant would survive the winter in the open

air, even in a sheltered position, though it might, provided the winter was not very severe, if covered up with plenty of straw, and a mat, or some old sacking, nailed to the wall. But the safest plan would be to take the plant up carefully in autumn, and place it in a large pot, or moderate-sized box, letting it stand outside till the frost threatens, and then remove it indoors, affording a fairly light position, where frost cannot enter.

POLYANTHUS.

Excessive Foliage.

Has the Polyanthus Primrose a tendency to go all to leaf? I have a quantity raised from the best seed, and many are as big as Cabbages, but showing very poor bloom. Those with the fewest leaves seem to flower best, but all are disappointing. Does it require rich soil?

The production of this excessive foliage is quite unnatural. These plants do not object to a moderately heavy soil, but yours must be too heavy, or too rich, or probably both. Do not use any more manure, but work plenty of old mortar-rubbish (crushed), or lime in some form (but not gaslime), into the ground, and you will soon notice a great improvement.

Flowering in Pots.

Will you tell me whether seedling Polyanthus, which are now (February) in "sixties," should be potted into a larger size? They are in an unheated house, but are beginning to show signs of new growth.

If you particularly wish to flower the plants in pots, they may be moved into 5-in. sizes, using good loam and manure, but as the plants will be pushing up the bloom-spikes it ought to have been done earlier. It would be better to plant them out in a sheltered position. If kept in the small pots, they must be well fed.

Forming a Collection.

I wish to obtain a collection of the finest Polyanthuses, particularly yellow ones—both the pale-lemon and sulphur-coloured. If I raise them from seed, will they come true selfs, or would it be necessary to buy plants?

Named varieties rarely possess either the vigour or the real beauty of good seedling Polyanthuses. Get a packet or two of seed—the best procurable—and raise your own plants. If carefully saved they come very fairly true, and with ordinary care make beautiful plants. Sow the seed early in spring—March is the best month—in a cool frame. They succeed in any good, loamy soil and a lightly-shaded position. The Polyanthus-Primrose hybrids are decidedly the most showy and effective forms.

Guard against Severe Frost.

What winter protection should be given to a bed of Polyanthus for spring blooming?

None whatever, unless very severe weather approaches, when a little dry litter or straw may be scattered over the plants.

Shade in Summer.

Ought Polyanthuses to be moved from a sunny aspect during the summer?

These plants certainly succeed better in a lightly-shaded spot during the summer; and may be removed, if convenient.

POLYGONUMS.

Failure to Flower.

My Polygonum Baldschuanicum have grown, but have not flowered. They were planted in the spring. Will you kindly advise me as to the proper course to adopt?

It is probably owing to the plants not being sufficiently established that they have failed to flower. If not too much in the shade, they should flower

another season. Fork some manure in, and give them a good soaking early in the spring.

Habit of the Plant.

Can you tell me anything about *Polygonum Baldschuanicum*? It is stated to grow ten to fifteen feet in two months. Is it a perennial, and does it die down?

This is a fine semi-climbing perennial, with heart-shaped leaves and large sprays of white flowers. It grows very vigorously and rapidly, but scarcely as fast as you say. It is a deciduous subject.

How to Propagate.

I have a *Polygonum Baldschuanicum* from which I am anxious to propagate. Will you say how and when this can be done? I have no heat—only a small cold frame.

This is best done by means of division, when the plant begins to grow, in the spring. Cuttings in the right condition may be struck, but the other is the better plan.

Overcrowded Growths.

I have a *Polygonum Baldschuanicum* growing on the front of my cottage. There are numberless growths. Can I cut any of them, and thin out some of the stems?

You may thin out the weak growths, and it will do no harm, and in autumn dig out some of the roots. When they get too much crowded, they weaken one another. If necessary, all the roots might be dug up, and the strongest replanted.

Soil and Treatment.

I am waiting to plant out a potted *Polygonum Baldschuanicum* till I hear what soil it should have, also what treatment.

Any fairly good and light soil will suit it, though it may need some drainage. Being a climber, it should be planted at the foot of a wall or fence, and, beyond a little training, all the care required is to cut away the spent growths in the late autumn.

POPPIES.

Dividing the Clumps.

When should clumps of Oriental Poppies be divided?

Just as they are commencing to grow again, in March or early April.

Flowers "Sporting."

Will you inform me if it is an unusual occurrence for Poppies from seed which produced pure white flowers for two years, to produce this year lovely flowers in very pale mauve colour? Some have been white, and true to name.

Poppies of all kinds, and the annual varieties more particularly, are very sportive or variable subjects, and new "breaks" are constantly occurring where these plants are raised from seed in any considerable numbers.

Plants for Shade.

What are the best kinds of annual Poppies for growing in shady places?

Any of the Poppies will do in a shady position if not overhung by trees. The Shirley Poppies and the Iceland Poppies are the prettiest of the annual sorts.

Raising Oriental Poppies.

I wish to cultivate some of the large, strong-growing Poppies—*Papaver orientalis*. Is it best to raise from seed, or to buy plants?

This may be raised from seed, but it must be sown early in the spring of

one season to flower the next, and preferably under glass. If you want only a few plants, it would be better to purchase these, planting them in the spring.

Wintering Iceland Poppies.

Will you give me the proper treatment for Iceland Poppies during the winter?

These plants require no special treatment during the winter; they are quite hardy, and will stand any ordinary weather, though in exposed places it may be as well to screen them in some way from north and east winds, or throw a little litter over the bed.

PRIMROSES.

Advantages of Fresh Seed.

About the end of June I sowed some seed of blue Primroses in a box in a cold greenhouse, but at the end of August there was no sign of growth. Could you say how long this seed takes to germinate?

If the seed was fresh the little plants ought to have appeared sooner; but if of last year's saving it may not germinate for several weeks, or even months. The great advantage of sowing the seed as soon as it is ripe is that it germinates almost directly, while if left till the spring it often takes a considerable time. April is the best time to sow Primroses, unless perfectly fresh seed can be had.

Best Situation.

I have some Primroses in the garden. Do they like a dry or damp, exposed or shaded, situation?

Primroses are not very particular, but to see them at their best the plants should never be allowed to want for water at the root—they grow well quite close to a pond or stream, but not actually in the water. Again, a lightly-shaded position is best, as being more natural to the plant than full exposure, but with plenty of moisture they will stand even this.

Dividing the Roots.

What month should Primroses be divided?

This should be done in the late spring, after the flowers are over, or in the early autumn—September or October.

Potting for Winter Blooming.

I purpose having blue Primroses in pots, for the window. When is the best time to pot them?

Strong roots of the plants mentioned should be obtained and potted about October. If you can put a few of the common Primrose in a cold frame, you will have flowers all the winter.

Treatment of Double Primroses.

Will you say what soil, manure, or other treatment is best for double Primroses? Mine have not done well this year.

These plants like a deep, mellow, and rather rich, loamy soil, and a cool or lightly-shaded position where they will not get dried up in hot weather. As a rule, they succeed better in the North than the South, but by choosing a suitable spot, and affording them the soil they like, good results may be obtained even in the warmer districts.

PRIMULAS.

Are Primulas Poisonous?

May I ask if Primulas are poisonous?

Some Primulas, especially those of the *P. obconica* type, are poisonous in the sense that touching the leaves causes a kind of irritating rash, resembling

eczema, but this is only the case with persons whose skins are very delicate or tender.

Blooming for Show.

I have a batch of *Primula obconica*, and have been busy keeping the flowers off as they appear. At what date should I refrain from pinching the flowers off, in order to have them in fair bloom on May 1st?

Why pinch off the blooms of this *Primula* at all? We do not, after the plants get fairly strong, but keep on cutting. If you prefer to keep on pinching, however, let the plants go about the first week in April.

Culture of Seedlings.

I have raised some *Primula japonica* from seed, pricked them out in little pots, and have them in a cold frame. How should I go on with them?

Keep the plants in the frame during the winter, and plant them out in the spring. If they grow strongly it may be necessary to repot them.

Effect of Overwatering.

Can you tell me what causes *Primulas* to "sleep," after the manner of *Tomatoes*? Among a dozen plants, nine of which are doing well, three have suddenly flagged and gone flabby, beyond recovery. All the plants have been treated alike.

The plants have evidently been overwatered, and the soil thereby rendered sodden, which causes congestion of the roots and the flagging of the leaves. Like most other pot plants, these ought only to be watered when the soil becomes moderately dry, when a full supply should be given, and no more until the soil dries slightly again. If you keep on giving them more water while the soil is moist, the plants are almost certain to fail as described.

Hardiness of *P. japonica*.

Will *Primula japonica* stand the winter in the open, and what treatment does it require?

Yes, this charming species is quite hardy—in any moderately light or well-drained soil, at any rate, though it is as well to place a little mound of ashes over each plant on the approach of hard frost; otherwise, it requires no special treatment.

Premature Blooming.

In July I purchased some *Primula* seedlings just large enough for 2½-in. and 3-in. pots. By August, several of the little plants pushed up flower-spikes. Can you account for this premature display? The plants have been kept on a shelf close to the glass, and shaded by a double thickness of muslin.

The check caused by the transit and repotting would partly account for this, but they frequently flower prematurely, even when grown on quite steadily. There is no harm in it—pinch out all the trusses that appear, until the plants are strong and the flowers are wanted, and, with due care, they will keep on blooming all the winter. At the same time, the first truss is usually the best, when the plants are grown on vigorously.

Resting Old Plants.

Should a *Primula obconica* die down after flowering, and have a period of rest, or be repotted?

This *Primula* ought not to die down after flowering, though it generally loses some of its leaves. Old plants should be allowed to rest for a time—say, a month—and then be either divided and potted in small sizes, or moved on into a larger pot. They may be repotted again in July or early August, if necessary.

Summer Treatment.

I have some plants of *Primula obconica* and *P. Sieboldii*. Will you tell me what treatment I should give them during the summer—they are in a cold house?

Primula obconica is an almost perpetual flowering kind; but if moved to a cool and shady spot in the open air, during the hot summer weather—standing the pots on ashes or slates, of course—and all the flower-buds picked off, the plants will bloom much better during the winter and spring. *P. Sieboldii* is a deciduous species, and enjoys a fair amount of sun for some time after flowering, until the leaves die down.

Treatment after Flowering.

I have some *Primula stellata* just going out of flower. What treatment do they require to keep them for blooming again next year?

These plants should be placed in a cold frame for a time, giving plenty of air and keeping them on the dry side to rest a little. About June, repot them into the same sizes, and afterwards move them on into pots two or three inches larger, according to strength, and grow them on in the usual way. They will bloom well in these pots again, next winter.

PRIVET.**Effect on Other Plants.**

Can I plant spring-flowering bulbs within a foot of a Privet hedge, with the hope that they will flourish from year to year, or is it true that Privet poisons the ground?

Bulbs may succeed, to a certain extent, in the position indicated, though the best results cannot be expected, and it will be advisable to cut the roots of the Privet with a sharp spade, just behind where the bulbs are to go, and work in some good manure, before planting. Privet is not actually poisonous in its effects, but it is of so hungry a nature that the roots absorb all nutriment from the soil as far as they can reach, leaving none for anything else.

Forming a Bushy Hedge.

I intend planting a hedge early in March, with Privet plants, one foot to eighteen inches high, and six inches between each plant. I want the hedge to be bushy close to the ground, and, in time, to trim it into a square hedge. Should I prune it at once, after planting?

No; let the plants "get hold" and begin to grow a little before cutting them back at all. Then cut them back rather closely, say, to about nine inches, so as to secure a nice close bottom.

Golden Privet turning Green.

I would like you to tell me the cause of Golden Privet turning quite green; the soil was good loam, well broken up, with leaf-mould and potting sand.

All variegated plants of this kind are liable to revert to the normal or green form at any time, though at the same time this Privet appears to be very constant, as a rule. Perhaps the soil was too rich, or the culture too liberal in some way.

How to Strike Cuttings.

Which is the right way to put branches of Privet to strike roots, and when should it be done?

Take any pieces of the young wood, with a head, if possible, and six inches or more in length, and insert them firmly to rather more than half their length in a bed of rather sandy soil, and they will root readily. Any time during the autumn will do, but the earlier the better.

Prune Frequently.

I shall be glad if you will tell me the right time to prune a Privet hedge. Should it be done annually? I wish to make a close fence.

Privet requires to be cut back frequently, to make a close hedge. It should be done at least twice a year, say, in winter, and again in June or July.

PYRETHRUMS.**Dividing Old Clumps.**

I have a lot of five-year-old Pyrethrum clumps, and want to increase them as much and as soon as possible. Would they be all right if done immediately after blooming? If so, could they be planted into their flowering quarters, or should they be made into nursery beds?

The best time to divide these plants is in the spring, when they are just beginning to grow again, but it may be done after flowering. If the plants are divided into quite small pieces, they had better be planted closely in a nursery bed, but if the divisions are fairly large they may be placed directly where they are to flower.

Keeping Golden Feather Compact.

I desire to use Golden Feather Pyrethrum as an edging, but it always seems to get straggly and out of hand, instead of looking neat and dwarf, as I see it in many public gardens. How can I induce the dwarf habit?

In order to keep the plants dwarf and neat, they must never be allowed to flower; all bloom should be rigorously pinched off.

Preparing Ground.

My garden is heavy clay land, into which I have dug road sweepings, and manure out of frames. Will this be suitable for growing good strains of double Pyrethrums?

Almost any good garden soil suits these plants; and if your ground has been prepared as described they will succeed quite well.

Raising Seedling Golden Feather.

I have sown some Golden Feather in a box under glass. Should it be stood out of doors in the daytime, and taken in at night, or kept in a sunny window?

The Golden Feather (Pyrethrum) is very hardy, and once up may be exposed on all fine days.

Second Blooming Period.

I have been told that it is possible to obtain two batches of flowers the same season on Pyrethrums. How is this accomplished?

The first lot of flowers must be cut soon after opening, so that the plant is not weakened; cut down the old flowering stems, and give a good soaking of liquid manure occasionally.

PYRUS JAPONICA.**Edible Fruit.**

Is the fruit of *Pyrus japonica* poisonous?

No; on the contrary, it is perfectly wholesome, and a rather nice preserve is sometimes made from it, when obtainable.

Making a Hedge.

I should like to grow a hedge of *Pyrus japonica*. Would it be very slow growing, and if it is clipped back into a neat, compact hedge, will it still flower well?

This plant would doubtless make a good hedge, as it is of a decidedly shrubby habit; but if grown in this form it must not be pruned or cut back

promiscuously, or there will be but few flowers. It is not particularly rapid in growth, but if good-sized plants are obtained, a fairly good hedge may be looked for in two or three years' time.

Propagating by Cuttings.

Kindly tell me the time to take cuttings from a *Pyrus japonica*, and how to proceed?

Cuttings of this plant should be taken in the autumn; take nice young sideshoots of the current season's growth, six to nine inches long, and each with a heel of the older wood, and insert them firmly in sandy soil and a rather sheltered position. They would do better in a cold frame, however.

Suitable Soil.

The soil in my garden is a stiff clay. Will this be unsuitable to growing *Pyrus japonica*?

This subject certainly prefers a lighter staple than that indicated; but it is very accommodating. If you could add a liberal amount of road sweepings, or other material, to lighten the soil it would be better.

Treatment for Bloom.

Will you tell me the method of treating *Pyrus japonica* to produce the best display of bloom. Should it be spurred back when it has done blooming?

This shrub does not require to be closely pruned, as a rule, as it flowers freely on the young wood formed the previous season. Any cutting-back should be done as soon as possible after the flowering is over, so that the plant may have time to make and ripen its new growth in readiness for the next season. Trees that have made more growth than there is room for should have the weaker shoots thinned out, leaving the strongest, which are sure to bloom well.

RANUNCULUSES.

How and When to Plant.

Will you inform me the best time and way to plant *Ranunculuses*? Should they be softened by immersion in hot water, or otherwise, before planting?

Ranunculuses should be planted in February. They should have a bed of deeply-worked, well-manured, and thoroughly mellow soil. Plant the roots four inches apart, claws downwards, with the crowns a full two inches below the surface, placing a little sand over each root, and covering the bed with dry litter or Fern if severe weather should follow. Do not soak the roots.

Pots not Recommended.

Will you give me a few hints as to the cultivation of *Ranunculus*? I have set some in pots; will they do best outdoors or in?

The *Ranunculus* would certainly do best in the border, but you might keep them in pots until the spring, and plant out as soon as they begin to grow. Keep them fairly moist, as they like a rather damp, cool position.

Raising from Seed.

What is the best way to raise *Ranunculuses* from seed, and when should it be sown?

This should be done in a bed of light, rich, sandy soil in February or March.

Removing Runners.

My double yellow *Ranunculus acris* plants, which are now in flower, are sending out runners all round them, and these root at the joints. Ought the

runners to be taken off, and, if so, when? If they are left on, the plants will take up far too much room.

Take the runners off, by all means; it may be done at any time, as required.

Storing the Tubers.

Are *Ranunculus* bulbs worth saving, and how should they be stored?

Yes, if the plants are of a good strain, and the roots sound and healthy, they may be grown on for several years. Lift them when the foliage has died away, drying the roots slightly, and then pack them closely in boxes, with some sand or light soil among them, and keep in a cellar or other suitable place, but not too dry. Replant in the spring, as soon as the frost fairly begins to break.

Uncommon Species.

Could you tell me something of the culture of *Ranunculus Lyalli*? I have had seeds sent from New Zealand. Will they stand our climate?

Ranunculus Lyalli, which is also known as the New Zealand Water Lily, is a rare and very beautiful plant, with white flowers in the early summer. It is a semi-aquatic, requiring cool greenhouse treatment. The seedlings should be potted on freely, always keeping the soil moist, and growing them, eventually, either in tubs, or, if in pots, standing these an inch or two deep in pans or a tank of water. A plant or two might be tried on the edge of a small pond, or in a "bog-hole" in a very sheltered spot in the open air.

RHODODENDRONS.

Absence of Lime Essential.

Is it necessary to plant Rhododendrons in peat. My soil is sandy and gravelly, with a small amount of clay.

That peat is the best soil for these plants there can be no question, but they will grow, and grow well, in almost any light or sandy loam—even in almost pure sand, with proper care. They do not like clay, however, and cannot endure lime or chalk in any form.

Cuttings Difficult to Strike.

Will you tell me if Rhododendrons can be grown from cuttings without heat? If so, which is the best month for striking them?

It is quite possible to strike cuttings of Rhododendrons, but it is not an easy matter, especially without heat. The plants should be grafted. Take the cuttings in the autumn, and insert them firmly in sandy soil in a cold frame.

Distinguishing Bloom Buds.

Is there any means of telling which of the new growth of Rhododendrons is for flower, and which for foliage?

Towards the end of the season, when the growth is nearly complete, you can distinguish the shoots that are going to bloom, by feeling the buds in the points of the shoots, even if you cannot see them.

Hints on Planting.

When should early dwarf Rhododendrons be planted or sown, and how?

Rhododendrons may be planted in the autumn, or the early spring; the early kinds preferably in the former. Plants must be obtained—you cannot sow seed. The shrub should be planted in the usual way, rather shallowly.

Manure before Planting.

I am making a bed of Rhododendrons. Should I dig the manure into it, or will it hurt the roots? If so, should I surround the plants with manure when once planted.

Dig any manure employed—which, by the way, should be well decayed and quite sweet—into the ground at such a depth that the roots of the plants will not touch it just yet. If obtainable, leaf-mould would be almost better; these plants are not gross feeders, and no manure should be placed over the roots when planted.

Moss Litter for Peat.

Will moss-litter peat (in powder) answer the same purpose as ordinary peat for Rhododendrons? I am referring to that which is used for litter in stables. Of course, I mean fresh, not after it has been used in the stable.

The finer portions of the peat-moss litter may certainly be employed for the same purposes as peat for Rhododendrons, but at the same time it should be borne in mind that this material is prepared from bog peat, which is always a somewhat sour and unwholesome material, at least, as compared with good upland peat. Use a sprinkling of lime with this material, some little time before using it; also take care to reject all the fibrous portions, which are most distasteful to the roots of plants of all kinds. After having been saturated with the ammoniacal liquid of a stable, the finer portions of peat-moss litter appear to afford an excellent fertilising material.

Preparing Tubs for Plants.

In the case of tubs made by cutting a petroleum barrel in two, what is the best way to prevent the inside rotting? As they are to be filled with peat, would this be sufficient in itself to preserve them, or the fact of the timber being saturated with petroleum?

The peat will not preserve the wood, and the paraffin would injure the roots of the plants. The proper course is to burn out the inside of the tubs; light a couple of good handfuls of shavings in each, and, when the wood catches fire, and begins to crackle, turn the tub over, and the fire will go out.

Pruning not Usual.

Should Rhododendrons be pruned? If so, how, and at what time of year?

Rhododendrons do not need any pruning, as a rule, unless they become straggling or overgrown, but any extra long or vigorous shoots should be removed, of course, to keep the plants in shape. The different varieties vary considerably in habit, some being more compact than others. The best time to prune is in the spring or early summer, directly after the flowers are over, when new growth is made at once.

Starved Roots.

My Rhododendrons flowered well the first year, failing the second, and this, the third year, have leafed well, but there is no blossom. Can anything be done to cause them to flower?

These plants may fail to flower owing to lack of nourishment; they should have a mulch of leaf-mould or old hotbed manure placed over their roots annually, preferably in the spring.

Stimulating Growth.

I have some Rhododendrons that do not seem to grow. What can I do to make them taller?

Mulch the plants with leaf-mould or well-decayed manure early in the year, and let it remain on all the summer. In dry periods, keep them well watered at the root, using soft or rain-water, if possible, and dissolve a little nitrate of soda, about half an ounce to the gallon, in the water given occasionally.

Treatment after Flowering.

What is the after-blooming treatment of young Rhododendrons, planted last autumn? They blossomed well, and look green and thrifty. Can they be helped for next spring?

Nothing can be done, except to pick off the dead flower trusses and any

seed-pods, and to keep the plants regularly moist at the roots. A mulch of short, well-decayed manure might also be placed round the plants, all over the roots; this will help to keep the latter cool and moist, and save some watering, as well as affording a certain amount of nourishment.

ROSES.

Aspect.

Aspect for Teas.

I have three Roses—Sunrise (Tea), Ernest Metz (Tea), and Mrs. W. J. Grant (Hybrid Tea). I want to plant two of them on the west side of a garden, standing exactly north and south, and the remaining one on the east side. I shall be obliged to you if you will inform me where to put them.

This is not a matter of any great consequence, but the west aspect is the most suitable for Tea Roses.

Climbers for a West Aspect.

I have a trellis, twenty-four feet long and eight feet high. It faces west, and has the sun from 11 a.m. till sunset; soil, clay. With what Roses can I best cover it, as a permanency?

Almost any of the finer climbing Roses, such as the Crimson Rambler, the White Rambler (Thalia), the Pink Rambler (Euphrosyne), Aglaia (yellow), the Longworth Rambler (light crimson), Ruga (blush), Rampante (white), with the old Gloire de Dijon, Aimee Vibert (white), Reve d'Or (yellow), and some others, will be found the most suitable for such a position.

Climbing Rose for a North-east Aspect.

Which is the best climbing Rose for covering lattice-work with a north-east aspect?

Turner's Crimson Rambler, Amadis (crimson), or Gracilis (pink).

Mrs. J. Laing on a Shady Wall.

I have been recommended to grow Mrs. John Laing on a north wall. Will you please give me your opinion?

The Rose you name is not a good or suitable one for a north or shady aspect. It is certainly vigorous in growth and free in bloom; but the growth must be ripened by free exposure to sun, or there will be few or no blooms.

Plants for Hedges.

Would Rosa Rugosa, Madame Bruant, Raby Castle, or double de Coubert form a nice dividing 20-ft. hedge for north side of a front garden?

Yes, but bear in mind that all of this class grow very strongly, and require plenty of room; if closely pruned they are useless.

Rose for a North Aspect.

My garden has a north-east aspect, and is very much exposed. Would a Marechal Niel do, or what other could I grow similar in colour?

The variety mentioned would be useless in such a position; plant Gloire de Dijon, Marie van Houtte, Belle Lyonnaise, and Reve d'Or.

Trees for a Cold Climate.

Would standards, half-standards, or bushes, be most suitable for a cold climate, such as the eastern counties?

All are equally hardy—it is the varieties that differ in this respect—but if the situation is much exposed, dwarfs and half-standards would be preferable.

Unsuitable Aspect.

I planted some Mrs. J. Laing Roses last autumn, under a north-west wall. They shot out in the spring, and I pruned moderately hard in April. Out of twelve plants half are dead, and the rest are doing no good. There is an old-established Gloire de Dijon on the wall, which does well. What is wrong with the Roses—could snails kill them by eating off young shoots?

The variety referred to is not at all suitable for a shady position—it is a strong-growing kind, and needs all the sun it can get. The "Gloire" is quite an exception, growing and blooming where scarcely any other Rose could exist. Move the plants left to a sunny spot, in the autumn, and plant something else.

Climbers.**Climbers for a North Wall.**

May I trouble you for information as to Roses for a low north-west wall? The pink and other Ramblers often succeed well in a shady position. These, with several of the Ayrshire and Boursault varieties, including Ruga (flesh-colour), Dundee Rambler (pink and white), Bennett's Seedling (white), Amadis (crimson), Gracilis (pink), Inermis (rose), etc., and Rampante (white), are the most suitable for such an aspect. The height of the wall makes a difference, and so do the local climate and general conditions.

Crimson Rambler Unsuitable for Standard.

I bought a Crimson Rambler as a standard, but am told that I must let it grow and train it. Shall I spoil it if I cut it back next spring?

This Rose is of no use as a standard; it is a vigorous climber, and should be planted against a pillar or archway.

Cutting Down Climbers.

A mixed lot of Ramblers and Noisettes have grown to a height of twenty feet on a trellis. They have made a lot of wood, but are bare at the bottom. Could I cut them down to, say, three feet from the ground in March, to get the bottom wood?

Yes, they may be cut down to any extent in March or early April, and if they are healthy they are sure to break again freely. You will, of course, lose a year's bloom.

How Many for an Arch?

I have an arch, seven feet by four feet by twelve feet, in the garden, and intend covering it with Crimson Rambler. How many plants shall I require?

One good plant of Crimson Rambler on each side of the arch will be quite sufficient.

Ivy and Roses.

I have a Crimson Rambler growing up the house side, but there are some small Ivies running over the place. Will these be injurious to the Rose tree?

You had better get rid of the Ivy, as this plant and Roses do not agree at all well, besides which this and other strong-growing varieties require all the space and nourishment they can get.

Some Good Climbers.

I want three Roses (climbers) to cover a trellis twelve feet high. I should like them good in the leaf, good in bud, and fragrant. Aspect south-east, subsoil clay, with good on top; garden open, with plenty of air.

We should suggest Aimee Vibert or Felicite Perpetue for a white (prefer-

ring the former), Bouquet d'Or or Madame Berard (the former is more free-flowering) for a yellow, and Reine Marie Henriette or Cheshunt Hybrid (red). When trenching the border, bring a moderate quantity of the clay subsoil to the top, and mix it well with the light soil and manure.

Culture.

Continuous Flowering Varieties.

Do the Sempervirens, Ayrshire and Rugosa sections, flower more or less continuously?

The Sempervirens Roses are almost evergreen. The Ayrshire and Rugosa varieties are not by any means continuous-flowering—they bloom profusely in some part of the summer, and, perhaps, last for a rather long period, but, like most of the H.P.'s, they really only produce one batch of blossoms during the year. The Boursault or Bourbon varieties are of a similar character. Several of the Teas and Hybrid Teas flower more or less continuously through the spring and summer.

Cutting Trailing Roses.

If trailing Roses have about six long trails, is there any harm in cutting one long trail full length in bloom, if other healthy ones are left, to peg down in autumn and replace the one or two cut?

Provided that there is plenty of young growth, the flowering sprays may be cut without the least injury.

Difference between Teas and H.P.'s.

What are the distinctive characters of Tea Roses, as compared with H.P.'s, and how are they distinguished?

The chief characteristic of the Tea Rose, generally, is its continuous and almost perpetual-blooming character. The habit of growth is usually more dwarf and bushy than that of the H.P. varieties, though some of the kinds are very robust and vigorous. The flowers are generally smaller than those of the H.P.'s, and though, as a rule, less rich or intense, are more delicate and varied in colouring. Another excellent test is the perfume, which, once recognised, can hardly be mistaken.

Growths from Root.

I have in a greenhouse a "Bride" (in pot), which bloomed splendidly last season (its first year). I notice two red shoots coming up out of the ground against the main stem, apparently growing out of the root—should these be kept? They seem to grow very fast, one being two to three inches long and in leaf.

These shoots are probably produced from the stock on which the plant is worked, and should be removed. It will be better to pinch or pull them off than to cut them; and if they persist, the plant should be turned out of the pot, removing some of the soil, and breaking these "rogue" shoots right away from the base.

Height of Growth.

Do the terms standard, half-standard, and dwarf Rose trees apply to the height from the ground?

Standard Roses are those grown on stems three feet or more in height, half-standards those on stems about two feet, and dwarfs are merely "bush" plants.

Hybridising Roses.

Could you please explain how Roses are crossed to raise new varieties?

This is done in the same manner as other flowers are crossed, viz., by transferring the pollen of one flower to the stigma, or rather stigmas, of another one. You will find the stigmas in the centre of most of the flowers, surrounded by a mass of anthers. Of course, these must be re-

moved from the flower to be operated upon before the pollen is shed, to prevent self-fertilisation.

Hybrid Teas near an Open Fence.

Open fences played havoc with some of my Hybrid Teas in spring. Would felt, nailed against the fence where the Roses are situated, be a good means of protection?

Felt would answer admirably for this purpose, and would no doubt make a considerable improvement in the health and vigour of the plants.

Material for Arches.

I want to plant Roses on six arches, but am warned by a gardener not to use galvanised iron ones, as they are hot in summer and injurious to the plants in winter. I thought of oak quartering, but am told that this wood exudes an acid which is injurious to many things. Do you think it would affect Roses?

The drip from galvanised iron arches is often injurious to the young shoots of Roses and other plants, but if the growth is above the arch no harm can be done. We have arches of this kind on which Roses of several kinds do well and flower profusely. It is not an easy matter to construct nice arches from oak quartering, but if properly constructed, arches made with the rustic or natural woodwork are unsurpassed.

Meaning of Classification.

What is meant by Hybrid Perpetual, Hybrid Tea, and Tea Roses?

These are the names of different classes of the Rose, the Hybrid Perpetuals having been obtained by crossing the China, Bourbon, and other classes, and the Hybrid Teas by crossing the true Teas with some of the Hybrid Perpetuals. The "Tea" Roses are so called on account of their perfume—they are Tea (scented) Roses, and nothing else.

Pegging-down Long Shoots.

Do you recommend pegging-down the long shoots of dwarfs, instead of pruning in the usual way?

The "pegging-down" system is excellent, especially where the object is to obtain a maximum number of medium-sized blossoms. The long, new shoots are not shortened, but pegged down evenly all over the bed, when they will produce clusters of blossoms at every joint.

Protecting Half-Standards.

I planted some half-standard H.P.'s in November, and, as they have no shelter from north-east winds, have covered the tops with sacking, and the stems, down to the ground, with dried bracken; have I done right, and when should they be uncovered?

Hybrid Perpetual Roses are comparatively hardy, and scarcely require so much protection as described; a little old sacking, or some haybands, wrapped round the stems, with some dried Fern (bracken) tied in the heads, would be quite sufficient. Remove the covering as soon as the worst of the winter is over, in February or early March.

Protecting Premature Growth.

My last year's bush Roses are now (January) out in leaf. Can I do anything to protect them in the event of severe frost?

No, leave them alone for the present, and when pruning time comes (in March or early April) all this precocious growth will be cut away, and this will force the lower or "back" buds to start.

Protecting Tea Roses.

What is the best thing to put round bush Tea Roses to save them from frost during winter? If straw is used, mice get into it, and it blows about.

Where the soil is light and sandy, a moderate quantity of horse or stable-

manure, if well-decayed, flaky, and sweet, does not form a bad protecting material, though we should hardly recommend it for a heavy soil. The best of all materials for this purpose, however, is burnt earth, or the product of a smother fire, which is entirely unobjectionable from any point of view, and acts as a slight fertiliser also.

Retarding for Exhibition.

I want, if possible, to take part in a show fixed for the middle of July. My garden is an early one, and the Roses are at their best the first week or ten days of that month. How can I retard their flowering?

In the open air, only by late pruning, and shading the buds or flowers while expanding. Naturally late varieties should be chosen as far as possible.

Roses for Buttonholes.

I wish to plant some good Rose trees, more for buttonholes than anything else. Gloire de Dijon, Safrano, John Hopper, Madame Lambard, and Glory of Cheshunt have been recommended by a friend, but I should like your advice.

The selection of Roses given is a fairly good one, though we should substitute General Jacqueminot (crimson), the Hon. Edith Gifford (flesh or blush colour), or Sunset (rich apricot), for John Hopper, which is by no means a good buttonhole Rose. The others mentioned are very free and good for the purpose indicated. Francis Bloxham (salmony-pink), La France (silvery-pink), or Victor Verdier (carmine-rose), would, however, probably prove more useful than Glory of Cheshunt.

Roses in Grass.

All the Roses I planted this year have done well, with the exception of two which died off. The plants were turfed up to their stems. Was this the cause of their failure?

It is a bad plan to lay turf right up to the stems of Roses—a space of at least eighteen inches or two feet in diameter should be left free round each plant.

Stiff Clay Soil.

What is the best thing to be done to grow Roses—it is a new garden, and the soil mostly of clay, and very stiff?

The main thing is to give them a deep and very rich root-run—the ground can scarcely be trenched too deeply, or manured too heavily. A clay soil, if well worked and manured, suits Roses well, but you should obtain plants on the Brier stock.

Suckers on Outdoor Plants.

Several Rose trees have not bloomed this year; they throw out a lot of suckers; would replanting them and pressing the soil very firmly round the roots be advisable?

The suckers must be removed, or the trees will never do any good. As a rule, it is sufficient to cut off, or pull up, any sucker-growths, but if very numerous and troublesome it may be as well to lift the plants in the autumn, cut away all the sucker-bearing roots, and replant them quite firmly.

Training Ramanas Roses.

How ought *R. atropurpurea* to be trained—on iron or wooden hoops, or as standards? These Roses are nearly evergreen, and the blossoms are followed by "hips."

Although these plants may be trained in any way that may be desired, they never present so natural and beautiful an appearance as when allowed to grow naturally, in the bush form.

Watering.

Is it a good practice to sink flower pots in Rose beds, and frequently fill them with water?

There is no objection to this plan; in fact, in dry weather, and with a light soil, it would prove decidedly beneficial.

Diseases, Pests, &c.**Bark Busting.**

A Rose, in the border in a cold greenhouse, has developed a swelling just above the ground, and the bark has burst into shreds. Will this prove serious? The tree seems fairly healthy, but has not made as much wood as usual this season.

This is a kind of strangulation at the point of the union of the stock and scion, and is caused by the former being unable to supply the latter with a sufficient amount of sap. Make a kind of box, a foot or more square, round the stem and above the point of union, and fill it with suitable soil, so that the scion can form roots of its own.

Black Spots on a Rose.

A Rose, growing outside a conservatory, has developed black spots, as per specimen enclosed. What is it, and what is the best remedy?

The leaves sent up are affected by some kind of fungoid disease, or "spot." Dust the foliage well with sulphur, or a mixture of sulphur and quicklime, in about equal parts, and if this fails to stop the progress of the disease, syringe the plant with a solution of sulphide of potassium. A vigorous growth should also be encouraged by mulching and watering the plant when necessary.

Blind Buds on a Banksian Rose.

A few years ago I budded on a Banksian Rose, but although the budding was successful, the plant has not made much growth, has never flowered, and always produces blind eyes.

If by this term blind buds are meant, they are usually caused by a lack of vigour in the stock. The Banksian Rose is not a good stock, being of a comparatively weak nature—the Brier, Manetti, and De La Grifferaie are the best. Try the effect of watering the plant two or three times with a solution of nitrate of soda or sulphate of ammonia, one ounce to a gallon of water.

Buds Destroyed by Grubs.

I budded several standard Roses, and later the buds began to die. On inspection I found underneath the bark dozens of bright red maggots, about one-eighth of an inch long, which had completely eaten the callus away all round, and underneath the buds. Could you tell me what they are, and if there is any preventive?

These are probably the maggots of the Rose tortrix (*T. Bergmanniana*), a minute moth, which lays its eggs in the bark, from which the maggots proceed, and, after a time, eat their way out again. The best remedy, in the case of a bad attack, is to cut the bushes right down and burn them, or, in the case of standards, to cut all the lateral or young growths back close to the main stem. These (the old stems, or stocks) should be cleaned down during the winter, removing all pieces of loose bark, etc., and then washing them well with some good insecticide.

Buds Dropping.

A Boule d'Or dwarf Rose, growing in a pot in a cold conservatory, looks very healthy, but the stem of the bud in each case becomes black, and eventually the bud drops. The temperature at night is not less than forty-three, and in the daytime it ranges from forty-five to sixty.

There must be something wrong at the roots of this plant—excessive

dryness or too much moisture probably; Roses in growth ought never to be allowed to become really dry at the root. Perhaps a little stimulant, such as guano, or soot-water, etc., is needed.

Buds Failing to Open.

I have some Roses which are growing well, and appear healthy, but the buds refuse to open. They come to this stage, and then decay.

It would appear that the roots are not in a healthy state. In dull, damp weather it often occurs that the buds do not open properly, even on well-established plants. Sometimes, by loosening the outer petals when they are found not to open freely, the evil may be remedied. If the ground is dry, water with liquid manure, and remove all the buds that have gone too far to be likely to open.

Cause of Mildew in Greenhouse.

For years I have grown Roses in pots in the greenhouse with considerable success. Till last season I never had a sign of mildew, but it has occurred again now. I have tried sulphur and mildew-wash, but they seem only to temporarily arrest the trouble. The plants have been treated exactly as in other years, and the growth and bloom are as good. Is mildew a temporary matter, or are the plants once attacked always subject to it, or has it become permanent in the greenhouse, and is that why I cannot eradicate it?

Mildew is a very troublesome affection, and where it has once appeared it is always liable to reappear in subsequent seasons. It may be produced, in the first instance, by one of several causes, such as excessive drought, a damp, stagnant atmosphere, and frequently by injudicious ventilation during the spring; a sudden draught or current of cold air, acting on the foliage while still young and tender, often gives rise to a most troublesome attack. Continue ventilating very carefully (especially when the wind is in the north or east), dusting the foliage frequently with sulphur, or, better still, a mixture of sulphur and lime, and keeping the plants in as high a state of health and vigour as possible. If the house can be cleared of everything alive, presently, burn two or three handfuls of sulphur in it (closed), which will settle any spores that may exist. Try sulphide of potassium on the foliage.

Crimson Rambler Failing.

Eighteen months ago I planted a Crimson Rambler Rose, in a position where it gets the whole morning's sun. The bush looked healthy, and was covered with buds last season, but a great majority of them failed to expand. Can you tell me the reason?

This failure may have arisen from any one of several causes. The plant may not have made sufficient roots to carry the large number of blossoms, or buds, formed; or the soil may not have been rich enough; or, lastly, it may have lacked enough moisture to retain and expand the buds. This fine Rose usually does well on an east aspect.

Exterminating Rose-beetles.

I find a small green beetle is damaging my Rose trees. However much I pick them off they still come; will you let me know what it is, and the best way to get rid of it?

This insect is probably the Rose-beetle, or Garden Chafer (*Phyllopertha horticola*). It is injurious to Roses as well as fruit trees. The best method of exterminating it is to spread sheets of paper or cloths beneath the infested plants, and shake the latter well. Then gather up all the insects, and destroy them by means of boiling water or fire.

Flowers too Loose.

Last year my Roses were disappointing, the flowers being very loose when full grown. Can you tell me the cause, as I wish to remedy this defect?

This fault is usually the result of insufficient nourishment; but if the

season is abnormally hot and dry, the flowers are apt to open too quickly to contain much substance. A good mulch would be very helpful.

Green-centred Flowers.

Mrs. Paul Rose always has green-centred flowers. Why is this, and how can it be prevented? It is a strong and healthy standard.

There is something wrong with this plant's general health—probably at the roots. Give it a dose of lime, or an occasional sprinkling of basic slag or bonemeal. Two or three waterings with sulphate of ammonia, one ounce to the gallon, will often cure this defect.

Grubs on Roses.

Could you tell me how I could destroy grubs on a Rose tree?

If you mean the Rose maggot, there is nothing that will destroy them; they must be hunted for and picked off by hand.

Lord Penzance Failing.

I planted a Lord Penzance Sweet Brier in March; it started very well, but the shoots have now (June) turned brown and dried up. The ground was trenched previously; it is sheltered from east winds and gets sun nearly all day. I have kept it watered during dry weather.

Frequent and violent changes of weather and temperature experienced in some springs are accountable for the browning of the shoots of this plant. These hybrid Sweet Briars are very vigorous in growth, and if properly planted (as appears to obtain in this case), very seldom fail to thrive. Give it time, keep moist at the root, and mulch with littery manure if drought sets in.

Mildew on Outdoor Roses.

What cure can I use on my Crimson Rambler, which is very much mildewed, both on the stems and leaves—the latter have almost all come off? The Rose is growing against the house.

The best thing to do is to give the plant a good coat of fresh limewash, with a couple of handfuls of sulphur stirred in the pail. This fine Rose seldom does well against a wall—it is much better out in the open, trained to a pillar, arch, or the like.

Remedy for Green-fly.

Is soft soap a good thing to kill green-fly?

Yes; but to it you should add a few drops of extract of quassia, or boil a handful of the chips in a quart of water for twenty minutes, and mix with a gallon of the soap solution.

Scale on Roses.

I have some Gloire de Dijon Rose trees on the back wall of my greenhouse. They are infested with scale, which makes all the plants on the back stage very dirty, and forms a black deposit, which falls upon them. What would be the best remedy?

No amount of fumigating or vapourising will affect this pest. Go over the plants carefully, scraping off the worst of the insects with a blunt knife or piece of wood, and then wash or scrub the stems well with the emulsion of soft soap and paraffin.

W. A. Richardson Changing Colour.

I have a William Allen Richardson, planted two years ago. Last year it bore Roses of the right colour; this year it has produced several fine flowers, but instead of the usual deep amber colour, they are almost white. What steps can be taken to prevent this in the future?

This is principally the fault of the season—too much moisture, too little sun, and too many changes. Possibly, however, the soil is not quite as it

should be; give a good dressing of lime, and if the fault continues next season, try two or three waterings (at intervals) with a solution of sulphate of iron, one ounce to the gallon.

Withered Rose-buds.

Can you tell me why the buds of General Jacqueminot die off as enclosed are doing? The tree is a standard, and the buds looked very healthy a week or so ago. I fancy that some insect pest has injured them, or would it be the rain?

The buds do not appear to be affected by any definite disease. The cause probably lies at the roots, which are unhealthy, or have been injured in some way.

Greenhouse and Pot Treatment.

Artificial Heat in Greenhouse.

I have a Rose-house, eighteen feet long by twelve feet deep, and ten feet high, facing south-west. Can I dispense with heat if I cover the roof with sacking in frosty weather?

It is by no means absolutely necessary to have any artificial heat in a Rose-house, though it is certainly desirable, especially if flowers are wanted either early or late in the season. A non-conducting covering of some kind on the roof is extremely useful in severe weather.

Catherine Mermet Shrivelling.

Can you tell me the reason the foliage of my Catherine Mermet shrivels, as the leaves enclosed show, and the remedy for the same? It is grown in a cool greenhouse, with roof and side windows for ventilation.

The leaves sent up were very flimsy, or "thin" in texture. Judging from their general appearance, we should say that the house was not ventilated sufficiently, or that the border was insufficiently drained, and the soil consequently sour and unwholesome. Whichever way the fault lies, it should be corrected at once.

Compost for Potting.

Please oblige by giving the proper compost for potting Tea and H.T. Roses from open ground.

This should consist of fresh loam that has been stacked up with some nearly fresh manure for three or four months, with a third part of leaf-mould and a sprinkling of bonemeal and soot added.

Flimsy Leaves.

I planted a Marechal Niel in the greenhouse last autumn in a very large pot, and buried the pot in the border. I have had some splendid blooms, but this last week the leaves have started to go like the enclosed—shrivelled and mildewed. Can you kindly tell me what is the matter? I have given it a little guano; the house is heated to about sixty degrees in the daytime, and fifty degrees at night.

The leaf enclosed was badly mildewed, and very "flimsy" in texture also. The atmosphere of the house has probably been kept rather too close and moist, and when the leaves are in this condition a sudden draught of cold air will cause mildew directly. This fine Rose seldom succeeds for any length of time under pot culture, and had better be planted out towards the autumn.

Gloire de Dijon in a Greenhouse.

Can I grow a Gloire de Dijon in an unheated greenhouse? It has a span roof, and I want the Rose to climb up the house.

If any Rose will succeed, it is the Gloire de Dijon. Plant it in October in a deeply-worked bed of any good, loamy soil, with plenty of well-decayed

manure worked in, and a liberal quantity of old lime-rubbish and some burnt earth. Place it in the sunniest position you have.

Marechal Niel in a Greenhouse.

I am just putting up a small greenhouse in a good, sunny position. I should like to grow a Marechal Niel. Though Roses do not generally flourish here in the open, does it follow that they will not do well in the greenhouse?

There is no reason whatever why a Marechal Niel Rose should not succeed admirably under the conditions described. With some good loam and manure about its roots, and a glass roof overhead, a "Marshal" Rose ought to afford admirable results. The locality may be rather too open and breezy to suit Roses outdoors, but this fault the shelter of the greenhouse will obviate. There is no finer Rose in cultivation than this.

Pot Plants Failing.

In February I received three climbing Roses in 8-in. pots, and put them into my cold conservatory. They are L'Ideal, W. A. Richardson, and Niphetos. The two former have just completed their blooming (May), and their flowers were wretched, being only one inch across, and of poor colour. Niphetos has not budded yet. In each case the main stem is only about the diameter of a lead pencil, and only one apiece has been allowed them. Will you tell me what to do with them?

The plants were evidently rather weak when received, but if left in the pots, these vigorous climbing Roses never flower to any extent. If still in the pots, plant them out (if possible) at once, in a well-drained bed of rich, loamy soil, and encourage any vigorous young shoots from the base of the plants. W. A. Richardson never does much good unless planted out, and thoroughly established; and if the climbing variety of Niphetos is referred to, the same may be said of this.

Purchasing Roses for Pots.

Kindly say whether it is better to purchase growing Roses already in pots, or plants from the open?

It will probably be better to obtain plants already established in pots—plants from the open ground are apt to behave in a somewhat erratic manner, especially in unskilled hands. The plants, if well established and strong when received, should be repotted into rather larger sizes at once.

Retarding Roses in a Greenhouse.

I have a lean-to greenhouse, facing south, planted up the back wall with Roses. These have made good wood, which has ripened fairly well. They are all breaking now (December), although they have not had much moisture. What ought I to do with them—should I cut them back, or leave them to grow on as they are? I only grow for buttonholes.

Any growth made at this early season is sure to be more or less weak, and will not flower so well as that formed a little later. Under the circumstances, reduce the temperature somewhat, and thus retard the growth. To obtain plenty of small blossoms, the Roses should only be pruned lightly, but cut out all the old or exhausted wood, and keep the rest moderately thin. This had better be done at once.

Rose Leaves Falling.

I have a span greenhouse, heated with oil lamps, which keep the temperature up to fifty degrees. My Rose trees in pots have a nice lot of leaves on, but seem so tender that at the least touch they fall off. Is it caused by giving them too much water?

It is almost impossible to define the cause without seeing the plants. The growth is evidently not healthy, but whether due to under or over-watering or some other reason we have no opportunity of ascertaining. The fumes from the stoves may have something to do with it.

Standing Out Pot Plants for Summer.

I am removing my potted Roses from a cool greenhouse to the garden for the summer months. Shall I do right in plunging them in the ground deep enough to just cover the pots, or should they be placed on the top and surrounded by ashes? If placing them in the ground is correct, how can I keep out the worms, but, at the same time, allow for drainage?

Do not plunge the pots in the ground, but simply stand them on a good bed of ashes in a sheltered and fairly sunny position. If plunged in the soil the pots are almost sure to become infested with worms, while it is better for the pots to stand "free," as when plunged it is difficult to tell when they require watering. If plunged in the soil, the hole should be taken out a few inches deeper than the pot will go, still tapering, and no worms can enter.

Treatment of Pot Plants.

Please tell me the best way to treat Roses in a greenhouse, planted in pots and tubs? Do they require stimulants when showing buds?

Roses in pots, or tubs, must be kept constantly moist at the root (though not necessarily wet) after the young growth has commenced, and also be frequently syringed overhead, especially in bright weather. Liquid manure should be given once or twice a week when the plants are in full growth, and showing the flower-buds, but only provided that the soil is well occupied with healthy roots. After flowering, remove them to a sheltered but sunny spot in the open air, where they may remain during the autumn and early part of the winter. Place them under cover of some kind on the approach of severe weather, if only to prevent the pots being split; but keep cool until the legitimate growth recommences.

W. A. Richardson under Glass.

I want a climbing Rose for an unheated, span-roof greenhouse. Will a W. A. Richardson thrive there?

This Rose, as a rule, does not succeed well under glass; but you might try it, planting it in rich soil, and in a sunny position. It generally takes some time to get established, and make a good start.

Winter Temperature for Flowering.

Can Roses be flowered in winter in pots, in a greenhouse averaging between forty and fifty-five degrees Fahr., night temperature?

Forty-five degrees at night is rather too low to enable these plants to expand properly; fifty-five degrees would do, and from this to sixty degrees is the proper range during the night, with a rise during the daytime.

Manuring.**Artificial Fertilisers.**

During March I planted some Tea Roses, from pots, in the open ground. Would it be wise to give these a little artificial fertiliser now (July), as they appear healthy, and are showing buds?

Certainly, this will do the plants a lot of good. Sprinkle it lightly on the surface, and prick it in gently with a sharp-tined fork.

Bones or Bonemeal?

Would Roses derive benefit from $\frac{1}{4}$ -in. bones, mixed with soil, the first year of planting, or would bonemeal be more suitable to get the desired effect?

The chief difference is that the meal has a more prompt result; but the effect of the $\frac{1}{4}$ -in. bones, though slower, is more lasting.

Fertiliser for Roses.

In the spring I am going to lightly hoe into my Rose beds the following mixture: One part nitrate of potash, one part steamed bone-flour (or bone-

meal), two parts old mortar. Will it be right to mix these together, or will they, when in contact with one another, produce some chemical effect nullifying to less or greater extent the good fertilising properties that each one in itself possesses?

The materials mentioned will not re-act on each other in any injurious manner, and the mixture may be safely used.

How to Mulch.

Please tell me the correct way to mulch Roses, and what manure, other than horse manure, can be used for the purpose?

Mulching consists in placing a layer of littery or strawy manure, two or three inches thick, over the roots. There is nothing to equal stable manure for the purpose, that of the cow and other animals being too close and "sad." If you cannot get stable manure, you might use rough leaf-mould, spent hops, or old tan.

Liquid Manure for Newly-planted Roses.

Is it advisable to give very weak liquid manure (half usual strength) after a very good soaking of rain, the first year?

Yes, if the plants are well-rooted, but not otherwise.

Manure before Planting.

Will it be injurious if I put fresh horse-droppings in the hole in which I purpose planting Roses, if I cover it with six inches of soil, or would it be preferable to put it in decayed?

The fresh manure will do no harm, provided it is buried rather deeply, and kept well away from the roots of the plants. This material supplies more ammonia than when decayed.

Marl as a Dressing.

I am told marl is a good thing for Roses. Is this so, and how should it be applied, after they are planted?

Marl is certainly an excellent dressing for Roses, especially on a light or sandy soil, but it should have been worked in the ground before planting. All that can be done now is to apply a little as a top-dressing occasionally, but lime will have much the same effect (on a light soil), if scattered freely on the surface, and pricked in very shallowly.

Mulching in Winter.

Should I mulch my Roses now (November), and fork it in during February or March, or should it be forked in at once?

Do not mulch in the winter with manure of any kind—especially with cow manure. The proper time to mulch is in the spring or early summer.

Overdose of Liquid Manure.

A few days ago I gave my Roses a stiff dose of liquid manure, about a quart each. I did not dilute it, and now all the leaves have dropped off, and the young shoots appear to be dying. What am I to do to start them again, if I have not already killed them?

Give the plants a thorough soaking of pure water at once, followed by two or three others as often as they will take it safely.

Soot as Fertiliser.

Does it benefit the ground, where Roses grow, to sprinkle soot on it in winter?

Provided the soil is not too light, a sprinkling of soot will probably do good, although it is of less value near large towns than in the open country. A little bonemeal or basic slag would be much more suitable.

Planting.

Cutting Back before Removing.

I am removing in September, and contemplate shifting a good many bush Roses—Teas, chiefly. Could I shorten the growths, and when? Of course, I should not think of closely pruning them. But, for convenience of transit, I should like them cut back, if it would not be harmful.

Cut back the long shoots moderately, by all means. This may be done from one to two or three weeks before moving the plants.

Depth to Plant.

I intend planting a number of dwarf Roses. Some growers' catalogues advise shallow planting, whilst others say plant deep and firm. This is rather confusing. What method do you advise?

As a general rule, Roses ought not to be planted deeply, especially when on their own roots, or in the case of standards (on the Brier stock); though dwarf plants that have been grafted or budded on either the Brier or Manetti stocks should usually be planted deep enough to bury the point of union some two inches or three inches, and thus allow the scion to form roots of its own.

Making a Rose Bed.

I am purposing cutting into a green to make a Rose plot. Kindly suggest depth, in inches, of soil, to take out, then say suitable material to fill in with.

If the soil is naturally good, dig or trench it to a depth of at least two feet, and, preferably, two and a-half or three feet, adding a liberal dressing of manure; the turf had better be buried, or be stacked up to decay, and placed round the roots of the Roses when planting. If fresh soil has to be employed, use a mixture of three or four parts of rather strong or heavy loam, and one part of decayed manure, with plenty of old mortar rubbish, and a sprinkling of bonemeal and soot.

Moving a Rose Cutting.

Can I move a Rose, struck from a cutting in the autumn, without hurting it?

If the plant is well rooted it may be removed now (February), but do not lose any time, and keep it well watered in dry weather until it is thoroughly established and growing again. The autumn is really the best time to plant Roses of most descriptions.

Planting-out Pot Roses.

When these are planted out in the garden, should the roots be spread out, or is it better not to disturb them?

Loosen the soil round the side of the ball with a piece of pointed stick, but do not uncoil them (which would imply shaking off all the soil), nor yet plant with the ball entire.

Removing Roses in August.

I have taken another house, and require to remove my Rose trees. Would you kindly advise me as to the safest and easiest method of transferring to my new house?

If the ground is at all dry at the time, give the plants a good soaking a day or two previously, lift them as carefully as you can, and, having the fresh beds all ready, get them replanted as quickly as possible. It is important to keep the roots of the plants from becoming dried up, or unduly exposed to the air, in transit. Water them in well, shorten any long shoots moderately, and, with ordinary good luck, they will be all right.

Shrivelled Plants.

I ordered some Roses from a nursery, and they were sent off at once—the middle of October. They seem to me to be very much shrivelled. Is it risky to move so early?

The middle of October is not at all too early to remove Roses, and the plants must have been either badly packed, or a long time on the road, to have shrivelled as described. They should be buried, bodily, in a trench for a few days, in moist soil, before being planted.

Transplanting Roses.

Would it hurt W. A. Richardson and Gloire de Dijon to shift them now (November), or would it be preferable to leave them until springtime? I only planted them last spring, but have now a better aspect for them.

In a moderately open position these plants will move better now than at any other time, but do it at once, digging and manuring the site well first.

Propagating.**A Question of Budding.**

Is it possible to bud a T. or H.T. on a H.P., or *vice versa*?

Yes, any variety of the Rose can be successfully budded on any other, irrespective of class, but many of the named varieties do not make good stocks.

Roses from Seed.

I should like some instructions in raising Roses from seed, the proper time to sow, and what soil would be best?

Get some pans, or shallow boxes, with some rough material in the bottom, for drainage, and fill up with a mixture of about equal parts of loam and leaf-soil, with half a part of sand, the whole being well mixed, and run through a not too fine sieve. Sow the seed, press it down gently, and cover with a bare quarter of an inch of fine soil. Place in a gentle hotbed, or greenhouse, and keep evenly moist. When nearly two inches high, transfer the seedlings singly to small pots, using good, loamy soil, keeping them fairly warm and close till established and growing. Move into larger pots in due course.

Seedling Briers for Budding.

If I put some seedling Briers in the ground in March, would they be fit to bud in July? If so, kindly state aspect, soil, and distance apart they should be planted?

If fairly large and strong, seedling Briers planted out in March should be in good condition for budding in July; but if very small, they ought to make a season's growth first. Any fairly open and sunny spot will suit the plants, and they may be placed about a foot apart in the rows, with a space of eighteen inches or two feet between these, until budded and growing, when they should, of course, be transplanted, giving them more space.

Stocks for Roses.

Intending to take cuttings of Briers this year, with the idea of budding them, would it be any advantage to select them for different kinds of Roses? For instance, some have shoots up to about twenty feet in length; would these be best for climbers, or, given the same conditions, would all Briers grow alike?

Vigour in growth of the common Brier or Dog-Rose is chiefly a matter of soil and local conditions, though there is no doubt that different (seedling) forms vary, to some extent, in habit and vigour, as they do in the size and colour of the flowers. The best stocks for climbing Roses are the seedling Brier and the De la Grifferaie, the latter being very vigorous. The stocks

for standards should have clean, straight stems, four to six feet high, with a fair amount of root.

Striking Cuttings in Water.

I have some Rose cuttings in water on a window. The old leaves have died, and new ones are sprouting. Shall I insert them in sandy soil now (November), or keep them in water till spring, and then insert? I have no cold frame or greenhouse.

These had better be kept in the water till roots have formed, for if potted off before, they are very likely to fail. We doubt if you will succeed in striking Rose cuttings in a window.

Sweet Briars from Seed.

A month ago (in March) I sowed several seeds of Sweet Brier in a box in the open. They have not yet come up. Is it any use my trying to cultivate these?

If the seed was sound it will germinate in due time, provided that it was not buried too deeply. The seed of Roses is always somewhat slow in germinating, and it would have been better if the box had been placed in a greenhouse or frame until the plants were up. Give it time, and keep the soil always just moist. Of course, the plants will not flower this season—probably not next. Transplant them early next spring.

Taking Buds.

Please tell me how to cut the bud from the Rose tree, and what part to cut it from.

The portion to be taken from the scion plant is a good plump bud, or eye, situated in the axil of a leaf, with a shield-shaped piece of bark, and a very thin slice of the wood at the back, the whole being about an inch in length. The cut in the bark of the stock should be made in the form of an inverted T.

Treatment of Cuttings.

I took some Rose cuttings last October, planting them in the open. I should like to bloom them in pots next summer. What size pots will they require, and can I pot them this October, plunging them in litter, or cinder-ash, in a sheltered position for the winter?

Much will depend upon the size and strength of the plants, but we should think 5-in. or 6-in. pots would be large enough. They should be potted very firmly, if the soil is in good condition, that is, not too wet. October will be a good time to pot them. Some of the long shoots may be shortened back, but the proper pruning should be left until the spring. Cinder ashes will be the best material to plunge them in. See that they are fairly moist before covering them up.

Pruning.

A Principle in Pruning.

As a general rule, should H.P.'s be pruned harder than Teas? Is it not the fact that Teas should not be hard pruned, chiefly because they are not so vigorous as H.P.'s?

Speaking generally, H.P.'s should be pruned, as a class, less severely than the Tea-scented kinds, for the simple reason that they are more vigorous in growth. The general rule is to prune strong-growers more lightly than shy or delicate ones. At the same time, there is considerable difference in the habit and vigour of the numerous varieties in both classes—some of the stronger Teas are more vigorous in growth than several of the weaker-habited H.P.'s. Tea-scented Roses of all kinds ought certainly to be pruned to some extent, but more or less according to the variety and the size of plant, or number of blooms, desired. When the object is extra fine blooms for exhibition, etc., the plants should be more closely pruned than if for ordinary decorative purposes only.

Dorothy Perkins and Pruning.

I have a Dorothy Perkins Rose, planted in a south-west aspect; it has borne hundreds of Roses this year, and has grown half-way up the house front. Should it be pruned at all?

This plant should certainly be pruned, and, when doing so, the object should be to cut out all the old, worn-out wood that has flowered, and to retain and encourage the strong young shoots from the base, which will produce an abundance of blossoms in the future, but if too numerous these also must be thinned out.

Dwarfs on Own Roots.

How should dwarfs (first year), on their own roots, be pruned?

In a general way, moderately, removing all the weaker shoots entirely, and shortening the strong ones to a fourth, or rather less, of their full length.

Excessive Pruning.

I have learned that in pruning Roses it is advisable to leave a certain amount of the wood of the previous year; but suppose a mistake is made, and all the wood of the previous year cut away, would the stems of two years' growth give shoots bearing Roses in the spring following the pruning?

If the plants "broke" freely and vigorously from the old wood (which, if thoroughly healthy, they probably would do), the young growth would most likely flower, more or less, at some time during the same season.

Moss Roses.

An old clump of Moss Roses which failed to bloom, was lifted in November, divided into four, and planted out in a border facing south-west. The rods on each are about two feet long. Should they be cut back to half or less? All four are alive, and commencing to break (March); when should they be pruned?

These plants had better be cut back to about a foot of stem, if only to obtain a vigorous young growth from the base; they may be pruned at any time now. Unless the ground was well dug and manured before planting, the plants had better be mulched with littery manure for the summer, as they are gross feeders.

Provence and Rugosa Roses.

Will you say how Provence and Rugosa Roses should be pruned?

Neither of this class requires much pruning—merely cut out any weak wood, and shorten extra-luxuriant shoots.

Pruning a Marechal Niel.

I have a Marechal Niel Rose in a cold greenhouse, which has just finished blooming (June). It was put into a 14-in. pot in spring, and is about five feet high, the main stem being about three-quarters of an inch in circumference, with four other stems branching out about two feet long. When and how would be the best time to prune?

You may cut away any of the spent or snaggy portions that have flowered and are of no further use, but beyond this do not attempt to prune the plant yet. In fact, the strong young shoots mentioned should be severely let alone, as it is on these that the bulk of the blossoms will be produced next year.

Pruning a Niphetos.

My Niphetos has just done flowering (May). Ought it to be pruned, and, if so, in what way? There is a great deal of old wood, the Rose having been established several years; should some of this be cut out, or is it only necessary to cut back last year's growth to a moderate extent, so as to encourage the new shoots which are just starting?

Cut away the old or exhausted wood that has flowered, leaving the strong

young growths—especially those from the base of the plant—intact, and training and encouraging them as much as possible. If duly ripened, these will bloom profusely in the next and following seasons.

Pruning Climbers.

I have just planted (December) in garden, to trail over wire arches, a Gloire de Dijon, with two shoots eleven feet long, and a W. A. Richardson with four shoots ten feet long. When should these be pruned, and to what extent?

The shoots had better be cut back to eighteen inches or two feet—if not done now, it will have to be done in the spring, probably. There is no advantage in planting such overgrown plants.

Pruning Newly-planted Roses.

When planting Roses in March, do you prune at the same time? A pamphlet issued by the National Rose Society says so. Does that mean two or three days, or a week afterwards, or the same day as planted, and have you to prune preliminary then, or finally for the season?

March is late for planting Roses (except Teas), and at that season it is just as well, if not better, to prune rather closely, or "permanently," as the reduction of the number of buds reduces the strain on the roots, and the growth is more vigorous, subsequently. It does not matter much whether the pruning is done at the time of planting, or a few days later. When planting in the autumn, however, reduce the top-growth moderately only, certainly if the tops are at all heavy.

Pruning Turned-out Climbers.

When climbing Roses are planted out of pots after flowering, should the growth be cut hard back the first season?

As a general rule, these should be allowed to make a free or natural growth the first season; but any old or hard wood may be cut out, leaving only the strong young growths.

Sweet Briers.

When is the right time to cut Sweet Brier Roses?

As a rule, Sweet Briers require very little pruning, but this should be done in March or early April. Take out some of the old, worn-out wood, and retain some of the best of the younger shoots.

The Time to Prune.

Do Roses need summer or winter-pruning, and, if so, to what extent?

Roses of all kinds must certainly be pruned to some extent, and in the case of plants in the open air the proper time is from March to the middle of April. Briefly speaking, all the weaker shoots should be cut out altogether, and the stronger ones shortened, more or less, according to their strength and the variety. Always prune the strong-growing kinds lightly, and the weak ones more severely.

Weeping Roses.

I have a Weeping Rose (Wichuriana standard, Rene Andre). The stems are over four feet long, but they have no sideshoots. Had I better prune them to half their length, so as to make them shoot out?

Do not cut the shoots back at all, but peg their points down to the ground all round, and let them alone.

Wichurian Roses.

How should I treat a Wichurian Rose, which has borne hundreds of blooms? Ought I to cut it back at all? It is quite high enough now, though there have been plenty of flowers low down.

Wichurian Roses require very little pruning; you may cut away the old wood that has flowered, to a moderate extent, but take care of the new shoots. The plant can be cut down moderately if desired in the spring. Give a little lime, basic slag, or bonemeal, in the autumn, and in spring put a mulch of littery manure over the roots.

SALVIAS.

Culture of *Salvia Pitcheri*.

What is the proper culture of *Salvia Pitcheri*?

Strike cuttings in a gentle warmth, in the spring or early summer, and either pot them on, in much the same way as *Chrysanthemums*, in good, loamy soil, or else plant them out of doors, and lift and repot in the autumn. They require a rather warm greenhouse in which to bloom freely in winter, and must have plenty of water.

Dwarf Plants.

When should *Salvia splendens grandiflora* seed be sown to obtain nice, small, dwarf plants, to flower in 5-in. pots in late autumn?

In order to obtain dwarf plants, it would be better to grow from cuttings than seed—seedlings are always more vigorous in growth; but cuttings of this plant, struck in April, and pinched once or twice, will make nice flowering plants by the autumn. The variety known as "compacta," or "nana," would suit you best, this flowering at about eighteen inches high. Rich soil and plenty of water and liquid manure are the most important points.

Leaves Turning Yellow.

What is the reason of *Salvia splendens* leaves turning yellow and dropping off? They are in 6-in. and 8-in. pots in a cold greenhouse, with plenty of air, and kept well watered? Have been out of doors in pots all summer.

These plants are probably pot-bound and starved; plenty of liquid manure would probably keep them going for a time, but they ought to have been repotted—they are hungry subjects. In a cold house they will only die down and do no good, however—they need the temperature of a well-heated greenhouse to bloom in the autumn or winter.

Pineapple-scented Variety.

Please tell me the treatment of the Pineapple-scented scarlet *Salvia*? They were grown outside from cuttings in the summer, and, when brought into the cold house, bloom-buds showed, but fell off. Now they are nice healthy bushes again.

The Pineapple-scented *Salvia* (*S. rutilans*) has not scarlet, but bright magenta-coloured blossoms. It will not bloom in a cold house in winter, and requires the temperature of a rather warm greenhouse. The plants had better be put out in the ground, and lifted and potted in the autumn, or they may be potted on into larger sizes, and treated like *Chrysanthemums*.

Raising Bedding Plants.

Will *Salvia coccinea* make plants for bedding-out next year, provided they are wintered in a cold frame in boxes and cut down?

No; this is a half-hardy annual, and must be raised afresh from seed sown in a gentle hotbed, towards the end of March, or in April, in a cold frame.

Storing Tubers of *S. patens*.

Is it right to dig up the tubers of *Salvia patens* and hang them in a dry place, the same as Dahlias?

The roots should certainly be taken up in the autumn, but do not hang them up—it is better to store them away in some nearly dry sand or fine soil. The plants are usually raised from cuttings, inserted in heat in the spring, but they may be grown from seed.

Striking Cuttings.

I have some *Salvia patens*, throwing nice young shoots. When, and in what temperature, should I try to strike them, and should I take off the shoots quite at the bottom? Some are nearly four inches long.

These shoots ought to be taken off quite at the base in February or March. Insert them in pots of sandy soil, and put them in the warmest place you have—in a glass-covered box over the hot-water pipes will do.

Treatment after Flowering.

Will you say what treatment *Salvia splendens* should receive after flowering under glass?

Any or all of the greenhouse *Salvias* should be kept cool and moderately but not too dry, for a few weeks after the flowers are over, cutting the growth back lightly. When they begin to grow again, in the spring, take off the young sideshoots, when about three inches in length, and insert them in sandy soil, as cuttings, when the old plants may be thrown away. The various forms, or sub-varieties, of this plant, such as *S. s. grandiflorum*, *S. s. nanum*, and *S. s. Bruanti*, all require the same treatment.

Wintering *Salvia splendens*.

Will you tell me the winter treatment for *Salvia splendens grandiflora*. I have some which are in flower.

These plants should be kept through the winter in a greenhouse in which a temperature of at least forty-five degrees at night is maintained, with a slight rise during the day, and air should be given rather freely. Let them have a light position, and give water liberally as often as the soil becomes slightly dry, with some weak liquid manure once or twice a week. A fairly moist atmosphere should be maintained round them, as they are rather subject to attacks of red-spider.

SAXIFRAGES.

Cold Greenhouse Culture.

I have an unheated greenhouse, and should like to grow mossy and encrusted Saxifrages. Please tell me how to proceed.

The culture of these Saxifrages is very simple, and they may be grown in well-drained pots or pans. Light, loamy soil, with a little leaf-soil, and some sand and old mortar broken up very small, suits them best. When well grown in pots, some of the larger kinds are very handsome.

Evergreen Species.

Are all Saxifrages evergreen? If not, which are most suitable for winter edging to borders?

Most of the perennial Saxifrages are evergreens, some of the best for the purpose referred to being *S. aizoon*, *S. aizoides*, *S. cæspitosa*, *S. geum*, *S. hypnoides*, *S. Macnabiana*, *S. Wallacei*, and *S. longifolia*.

How to Propagate.

How and when should I propagate Saxifrages?

These plants are generally increased by means of division, in the spring,

but, if seed can be had, they may be raised in this way also. Sow in the spring.

Taking Offsets.

I have some Saxifrages of the encrusted kinds—*aizoon*, *cotyledon*, *Hosti*, and *lantoscana*. Can I divide them by taking away the outside shoots, or rosettes, close to the stem of the main plant? When should this be done?

Yes, the offsets may be taken off, and planted elsewhere, as they become large enough. This may be done after flowering; but we prefer the spring, as they form roots with greater certainty.

Unhealthy Plants.

I have rockwork covered with a Saxifrage. This year it has gone very brown, and does not look so healthy as some I have in another place near it. Ought I to cut it back? It is very thick, having grown on this bank of rockwork for years.

This Saxifrage is evidently worn out; cut it back, preferably in the spring, and give a top-dressing of good soil. If this does not have the desired effect, it must be taken up and replanted elsewhere.

SCHIZANTHUS.

Aids to Success.

Will you give me some hints regarding *Schizanthus Wisetoniensis*? Mine grow fast, but rather leggy, and come into flower when very small. Some are in a cold frame, and others in a warm greenhouse. Should the flower-buds be pinched off as they appear?

The *Schizanthus* is not difficult to grow, as a rule. *S. Wisetoniensis* is certainly very free-flowering, and it might be advisable to pick off some of the earlier blossoms. The great thing is to keep the plants growing on steadily, in rich soil, and with plenty of moisture. They also require plenty of light and air, and on this account a span-roofed house is better than a lean-to. They ought to do well in a cool frame.

Pinching not Required.

I am growing *Schizanthus* from seeds, and I have now put them into small pots for planting out or potting. What height should they grow to before pinching back, to make them bushy?

These plants do not require any pinching, as a rule, as they are of a naturally branching habit.

Size of Pots.

I have sown some *Schizanthus* seed. How many plants should I put in a "forty-eight" pot for early flowering?

Four or five good plants of the *Schizanthus* will be enough for a 5-in. or 6-in. pot.

Sowing Seeds.

Can I sow the seed of *Schizanthus* in the spring, in the open border, where it is to flower?

These plants are not at all hardy, and although the seed of *Schizanthus pinnatus* varieties may be sown as you suggest, most of the others are half-hardy, and require to be sown in gentle warmth under glass.

Winter Blooming Doubtful.

When ought I to sow the seed of *Schizanthus*, to flower in the winter in an unheated greenhouse?

It is doubtful whether you will get the *Schizanthus* to bloom in the depth of the winter, certainly in an unheated greenhouse, but, if you like to try, sow the seed in July or early August.

SMILAX.

Best Compost.

What is the best soil to use for Smilax (*Asparagus meleoloides*)?

Any light, porous, and moderately rich soil answers, a mixture of fibrous peat, with a third or fourth of leaf-mould and loam, with a fair allowance of sand, being perhaps the best.

Low Temperature not Fatal.

I have a greenhouse which I keep above forty degrees during winter. Would it be possible to grow Smilax in same?

You may grow Smilax, but to do the plant justice, the house should be kept fairly close and moist during the summer. This plant is moderately hardy, but grows very slowly in a low temperature.

Plants Dying-off.

Will you tell me how to treat Smilax? I have had two pots die off, one after the other, but the hulbous roots seem to be quite sound still.

This plant really requires the heat of an intermediate house at the least, to do well, and it succeeds better planted out than in a pot. In the spring shake them out, repot, and try to start them again in a gentle hotbed, or the warmest place you have. They require plenty of water.

Slow Growth of Seedlings.

I have raised some Smilax from seeds. They are about three inches high, and are branching out well, but I wish to get them to climb, and they seem to have no desire to do so.

This plant is frequently slow in growth at first, especially when raised from seed. They have to make plenty of root, but in due time they will begin to "run," and, as a rule, seedlings grow more freely than plants from cuttings. Keep them on the dry side during the winter, especially in a low temperature, and plant them out and give them a warm, moist atmosphere in the spring.

Temperature Required.

At what temperature should Smilax be grown to ensure the best results?

Smilax enjoys a temperature rather above that of an ordinary greenhouse, or a range of about sixty to eighty degrees, during the growing season, with plenty of moisture.

Training the Growths.

Is it possible to let Smilax grow downwards from the greenhouse roof?

The growths may be allowed to hang down, but are best trained on strings, only a single growth or shoot being placed to each. When cut, train up another in its place.

SNOWDROPS.

Culture in Fancy Bowls.

Will Snowdrops grow in fancy bowls? If so, how should they be planted?

If these bulbs are planted in shingle and water, or shallowly in any good, light soil, they will do well.

Forcing Inadvisable.

I potted up some Snowdrops in the autumn, and brought them on in a fairly warm temperature, but although there was no lack of foliage, no flowers came. Was anything wrong with the treatment?

Snowdrops do not like a warm temperature, but thrive best under quite cool conditions. They are not good plants to force.

Treatment after Blooming.

I have some Snowdrops which have done blooming. Will the bulbs be of any use for flowering next year?

You may lift these bulbs when the foliage is dying away, but, if the soil is any good at all, leave them in the ground, and they will bloom again next year.

Unhealthy Soil.

What is the cause of the long, thin, white worms attacking Snowdrop bulbs, so that they rot? Will too much manure in the soil cause it?

The insects are probably thread-worms, and are very destructive; their presence denotes a sour and unhealthy state of the soil. For this state of things there is nothing but lime as a remedy, scattering it freely on the surface of the soil, and, after letting it lie for a time, working it in quite shallowly. If the ground has been over-manured the lime will correct this.

Worn-out Bulbs.

Last year I had some Snowdrops given me, which I put in my garden. They produced nothing but foliage. What was the cause of this, and is it any use leaving them in?

The bulbs were either not properly matured, or else they were worn out—the latter, probably. If the soil of your garden suits these plants, and they increase, the young bulbs will flower in due course.

SOLANUMS.

Blossoms Falling.

I have a *Solanum jasminoides* in a 7-in. pot. It has a shoot ten feet long, and sideshoots of about two feet, besides others on the main plant. As soon as the buds show colour, they fall, without opening. Why is this? The plant is kept watered, not soaked or sodden.

This plant lacks sufficient root-room. It is a strong-rooting plant, and such an example as this is cramped and starved in a 7-in. pot, no matter how well watered or fed. Plant it out in a small bed of good, loamy soil, or even in a moderate-sized box (such as a sugar-case), and it will drop its blossoms no more.

Cooking Fruit of Aubergine.

Is the fruit of the Egg plant good to eat? If so, how is it used?

The fruit of this plant is certainly edible, and is said to be very nice. It is usually cut in slices and fried in oil, or used in stews, soups, etc. It is fairly soft when ripe.

Egg Plant Culture.

How can I grow Egg plants? I can only get them the size of a small Pear.

The Egg plant, or Aubergine (*Solanum melongena*) is not a difficult plant to grow. Sow in warmth early in the spring, and pot the plants singly as soon as large enough. During the early stages they may be grown in an intermediate temperature, say, from fifty-five to sixty degrees, and should have a light, open position. Pot in good loam, with some manure added, and when the fruit appears give liquid manure.

Flowers not Setting.

My Solanums are flowering very well outside, but most of the flowers drop off. Would fertilising the blooms be of any use, as with Tomatoes?

If the flowers do not set, they may be fertilised, but if the plants are healthy, and liberally supplied with water, they will usually set naturally.

Management of Young Plants.

I have some *Solanums* (Cherry plants). Will you tell me the management of them?

These plants (*Solanum capsicastrum*) are usually grown from cuttings, inserted in the spring, and potted on into 5-in. or 6-in. pots, or planted out of doors for the summer. They require good, loamy soil, and rather free supplies of water and liquid manure, and the points of the long shoots should be pinched off as soon as they are well in bloom.

Pruning *Solanum jasminoides*.

When and how should *Solanum jasminoides* be pruned? I planted some on the house wall, and they have covered all the space I want them to.

Cut the plant, or plants, back to any reasonable extent in the spring, when they begin to grow again.

Summer Culture.

Will you tell me how to treat *Solanums* (the little red-berried plant) after the berries are over? Can they be rested during the summer, and repotted in the autumn?

The *Solanums* may be cut back rather hard in the spring, when the new growth commences, and towards the end of May be planted out in good soil and a sunny position. Keep them well watered in dry weather, pinch out the points of the strongest shoots as soon as there are plenty of berries set, and, when these begin to colour, lift them carefully, pot, and keep them rather close, moist, and shaded for a week or two till established.

Tender Annuals.

Can I keep Egg plants through the winter without a conservatory? They have been out of doors in the summer, in pots.

The Egg plant is a tender annual, and cannot be kept over the winter in a conservatory—the plants will soon drop all to pieces.

SPIRÆAS.**Ample Moisture Essential.**

I have just planted some *Spiræas* in a cold frame. Will they require water from the outset?

Spiræas should be kept moist from the first, and be watered abundantly when the roots have fairly started into growth.

Blooms not Breaking.

Some *Spiræas Palmata*, from Holland, are three feet high, and have had flower spikes on them for two months, but they do not break into bloom. Can you tell me the reason?

If these plants have been forced at all, as seems probable, the failure is accounted for at once—this species of the *Spiræa* must be grown without any artificial heat. You might try the effect of two or three waterings with a half an ounce to the gallon solution of nitrate of soda and soot, alternately.

Drainage in Tubs.

When growing *Spiræas* in tubs, to be sunk in the ground, or otherwise, should holes be made in them, or the tubs remain watertight?

There should be a hole in each tub, at or near the bottom, fitted with a plug, to allow of the water being drawn off during the winter, and occasionally at other times. The holes are placed preferably in the sides of the tubs, near the bottom.

Flower Spikes Absent.

My *Spiræas* were potted in turfy loam, leaf-mould, and sand, in 6-in. and 7-in. pots. The most forward has plenty of good foliage, but only one stalk

of bloom showing and nearly expanded. Can you give me any hints as to treatment?

The culture of these plants is very simple; in a genial temperature, and with plenty of moisture, both at the root and overhead, they seldom fail to grow and bloom freely. The embryo flower-spikes must, however, have been already formed in the crowns before they are potted, and if not present, owing to defective culture, they cannot be developed. In this case the fault probably lies with the roots. These plants flower better when not over-potted; it is better to reduce the roots a little, at the base, than to surround them with a large quantity of fresh soil.

Hardiness of *Spiræa japonica*.

I have some *Spiræa japonica*; are they hardy, or do they need protection?

These plants are perfectly hardy, but as the tender young growth is apt to be nipped by late frosts in the spring, they should be planted on a sunny border.

Starting the Growth.

I have clumps of *Spiræa compacta* and *Spiræa palmata*. How should they be treated?

The roots of both must be potted early in the spring, using sizes just large enough to contain them, with a little fresh soil (sandy loam) round each. Put them in a pit or frame (or under the greenhouse stage), plunging and partly covering them with cocoanut-fibre or coal ashes till rooted out and started into growth, then bring them into the light, and keep moist. *S. palmata* must not be forced.

Three Different Species.

I have *Spiræas* *Douglasi*, *argentea*, and *japonica*. The two former are three feet high, while the latter is merely a clump, with a few shoots. Are they all of the same habit?

Spiræa Douglasi and *S. argentea* are both shrubby species, the former being an evergreen, and the latter deciduous, but *S. japonica* is a herbaceous kind, with white flowers in the early summer. The two first-named grow from five to six feet in height, and occasionally more, but the last seldom exceeds one and a half feet. This requires a warm and sheltered position when grown in the open air, with a light and free soil, and plenty of water while in growth. The others will succeed in any good soil, preferring a moist position.

Treatment after Flowering.

What shall I do with *Spiræas* when they have done flowering—can I flower them in the greenhouse next year?

The roots may be turned out into the open ground, and lifted, potted, and grown again in larger sizes next season; or they may be kept in the pots, and liberally supplied with water and liquid manure. But the best plan is to divide them into pieces, with about three growths, or crowns, apiece, and plant them out in a bed of well dug and manured soil, when in two years' time they will have made capital forcing roots again. In any case, they must have plenty of water.

STEPHANOTIS.

Annual Repotting Necessary.

How often should *Stephanotis* be repotted?

When grown in pots, this plant should be repotted annually. If there is room in the house, it is better planted out

Cutting Back.

Is it advisable to cut back the *Stephanotis* after flowering?

A certain amount of pruning is necessary, but this depends on the growth

and other conditions. If at all crowded, there should be a thinning out, and all weak growths should of course be removed. Any pruning required is best done quite early in the year.

General Treatment.

Will you give the general treatment of the *Stephanotis*?

This is a tropical subject, requiring the high temperature of a stove, with plenty of moisture, through the spring and summer months, but, if kept moderately dry, the plants will stand a temperature as low as forty-five degrees while at rest in the winter, and be all the better for it. During the season of growth and flowering the temperature should range between sixty-five and eighty or ninety degrees, with a constantly moist atmosphere. A little whitewash is usually brushed on the glass over the plants in the height of the summer, to prevent any scorching of the foliage.

Propagation.

When is the best time to take cuttings of the *Stephanotis*? Is any special treatment necessary?

Cuttings of the young sideshoots, each taken with a heel, and the lower leaves removed, may be inserted in small pots of very sandy soil in the early spring, and plunged in a hotbed at about eighty degrees; if kept close and shaded, they will nearly all root in a short time. Or pieces of the matured shoots, each with two joints, may be put in well-drained 5-in. pots, several in each, and stood in a heat of sixty degrees in the winter, plunging them in a good hotbed when callused, potting them off singly when rooted.

Suitable Compost.

What is the best soil to use for the *Stephanotis*?

Stephanotis thrives best in a compost of light loam, with half the quantity of peat or leaf-mould, and some sand, with free drainage, as plenty of water is necessary when the plant is in growth and bloom.

Training the Plants.

Is *Stephanotis* usually trained round sticks? If not, how should it be trained?

Stephanotis may be trained to sticks or a balloon-shaped trellis, or (preferably) to wires fixed longitudinally just beneath the roof.

STOCKS.

Brompton Stocks.

Flowers in Winter.

How should Brompton Stocks be treated for flowering during the winter? I have some in 5-in. pots, and others in boxes, standing out on ashes. Will they need another shift?

If properly potted, those in the 5-in. pots will flower well as they are, giving them some weak liquid manure, now and then, when the pots are well filled with roots. But to do any real good, they must be quite firmly potted in rich, loamy soil, with an admixture of old mortar, or lime-rubbish. Those in boxes will do for cutting (if not too closely planted), or they may be potted off singly, to flower in succession to the others. In the autumn, give the shelter of a cool pit or frame, but with plenty of air, bringing them into the greenhouse as they show the flower-spikes, or when the weather becomes very stormy or cold.

Habit and Height.

What is the period of flowering of Brompton Stocks, also habit and height; and, in a bed, what distance should be left between each plant?

These plants are biennials, occupying a position between East Lothian

and Intermediate Stocks. They attain a height of a foot, or rather more, and are very free-flowering, while the colours are exceedingly rich. In the open air they flower during the late summer and autumn, but they may be got into bloom in the winter or early spring.

Planting Out.

When is the best time to plant out Brompton and Intermediate Stocks? The plants are in boxes in a cold frame, and are about three inches high. Could I pot some of them?

Towards the end of March, or early in April, when the weather becomes fairly genial, and the plants are getting strong; harden them off well first. A good type of the Intermediate Stock makes nice pot plants, but the Brompton Stocks are rather too vigorous in growth.

When to Expect Bloom.

I sowed some Stock seed in the spring (without heat), potting the plants off when large enough, and finally planting them out in the first week of June. They are all beautiful, strong plants, but not one has a sign of any bloom. Can you give me a reason?

You appear to have the Brompton Stocks, which do not flower until the second year. If the weather is not too severe, they should stand the winter and flower early in the spring.

Young Plants Preferred.

Kindly say whether Brompton Stocks, planted last autumn, and flowered this year, should be pulled up, and young ones planted for next season's display, or whether they should be left to flower again another year?

These, if desired, may be left to flower again another year, but as they often become very large and straggling, it is usually advisable to employ young plants, treating them as biennials only.

Ten-week Stocks.

Blooms not Simultaneous.

What must I do to get the laterals of Ten-week Stocks to bloom at the same time as the central spike? They are wanted for exhibition.

The central spike naturally commences to expand before the laterals, and, on the whole, it is desirable that this should be so; but if the plants are grown vigorously the laterals will begin to expand while the central spike is still in perfection. Some varieties open their blossoms more simultaneously than others.

Different Varieties.

What is the difference between the Ten-week Stock and Nice Stock?

The Rose de Nice and Beauty of Nice are winter-flowering varieties, while the others bloom in the summer.

Distinguishing Double Plants.

How can I tell whether a seedling of a Ten-week Stock will produce a double bloom or not, the seed being from an ordinary mixed packet?

As a general rule, the strongest and most forward plants, with coarse, fibrous roots, produce single flowers only, and should, consequently, be discarded; while the medium (not weak) growers, with plenty of fibrous roots, generally produce double blossoms.

Feeding Exhibition Plants.

Should exhibition Ten-week Stocks, in pots, have much manure-water, and rich top-dressings, or do they grow coarse and lanky under such treatment?

When the pots are well filled with roots, and particularly after the flower-

buds appear, liquid manure, etc., may be given in moderation with great benefit. Keep the plants close to the glass, with plenty of air, and they will not become lanky.

Good Compost.

What kind of soil do seedling Stocks require?

A mixture of about three parts of fairly light loam, two parts of leaf-soil, and nearly a part of sand, answers capitally. If any manure is used, it should be very old and well decayed.

Obtaining Seed.

I wish to know how to gather the seeds from Stocks to produce double flowers next year.

Double-flowered Stocks, however fine, never produce any seed. The only way is to grow the doubles and singles together, and gather the seed, when ripe, from the best of the single-flowered plants growing among the others. Or you may grow them in pots under glass, and, when in bloom, fertilise the singles with pollen from the doubles. Wait till the pods have turned yellow, and are beginning to open—but do not let them stand too long; then gather them, finish drying in a sunny window, and, finally, thresh or shell out the seeds, and store them in a dry place for future use.

Semi-double Flowers.

What number of petals constitutes a semi-double Ten-week Stock. I know a single flower has four petals, but I want a plain definition of a semi-double flower.

A semi-double flower is intermediate between a truly single one and a thoroughly double blossom, having more petals than the former, but less than the latter, but there is no definite or exact number. We should hardly call a blossom with only five petals "semi-double," but anything with, say, a double row (eight) or more might be included in the term.

Size of Pots.

What sized pots should Ten-week Stocks, grown for exhibition, be flowered in?

These are usually grown in 5-in. pots; but, if the plants are strong, they may have the 6-in. size.

Stopping Unnecessary.

Will you inform me what treatment to give Ten-week Stocks, after planting out, in order to ensure good laterals?

If the plants have been well-grown throughout, and are consequently healthy and sturdy when planted, giving them a moderately rich and free loamy soil, they will branch out quite naturally, and without any stopping or special treatment whatever.

Temperature for Raising Seedlings.

I have a propagator, and wish to raise some Stocks. What temperature should be kept?

A temperature of fifty to sixty-five degrees is about the best for this purpose.

When to Sow Seed.

Will you tell me when the seed of double Stocks should be sown?

To obtain good results, seed of Ten-week or German Stock, which is the best for ordinary purposes, should be sown rather earlier than that of most half-hardy annuals, the best month being February, or not later than the first week in March. Sow in boxes of light, loamy soil, with good drainage, and keep near the glass, with plenty of air, from the first.

STREPTOCARPUS.

Drainage and Soil.

Will you tell me the best soil to use for the *Streptocarpus*?

The *Streptocarpus* is a shallow-rooting plant, and requires plenty of drainage. It should be potted loosely in a rough, open compost, consisting of fibrous loam and peat, or leaf-mould.

Mildewed Plants.

I should be glad if you could tell me the proper treatment for *Streptocarpus* plants? Mine are going mildewy.

If troubled with the ordinary form of mildew, the plants should be dusted over with sulphur, or, what is more effective, fresh slaked lime and sulphur in equal parts. The leaves retain moisture at the base, and sometimes a slimy white growth spreads over the base of the leaves; this should be removed, and the lime and sulphur would, to some extent, check its progress.

Mixed Seed.

Will you tell me why some of my *Streptocarpus* are ordinary in growth, but others have developed one large leaf only—one measured is fifteen inches long by thirteen inches wide, with a stem as thick as a man's finger. All have been treated in the same way, and from the same packet of seed.

The reason of the plant coming of two types is that you were supplied with a "mixed" packet of seed. The plants with the one large leaf are *S. Wendlandii*, the leaves of which often come larger than you describe, and the rest are the ordinary *Streptocarpus* hybrids.

Precocious Blooming.

Should *Streptocarpus* be allowed to flower in the thumb pots, or the blooms be picked off till they are in "forty-eights"?

These are very precocious bloomers, and there is no harm in allowing a truss or two to remain on each little plant. But if you want strong specimens in the larger sizes, it will be better to pinch the flower-buds out.

Preliminary Growth Slow.

Is *Streptocarpus* from seed usually very slow-growing? I sowed it some time ago, and the seedlings are still most minute, hardly big enough to prick off. What sized pots should they flower in?

In the small or primary stages, yes. Prick the seedlings off as soon as they can be handled at all, and keep them moving with plenty of warmth and moisture. After they have got hold of the fresh soil, and formed one or two proper or "rough" leaves apiece, they will grow much more rapidly. They may be bloomed in 3-in. to 4-in pots.

Sluggish Plants.

Could you tell me why some *Streptocarpus*, which I obtained some months ago, do not flower? They have been in a cool house (east aspect) ever since, and, though still green, have never grown at all since they were potted, and show no signs now. What can I do?

These plants have got into a sluggish condition, and want "waking up" in some way. If you could plunge them in a gentle hotbed, keeping them moist and shaded, they would probably soon begin to move. If they are pretty well rooted out (you can tell this by turning out two or three on the hand), give them a weak solution of nitrate of soda or sulphate of ammonia (a quarter of an ounce of each to the gallon), once a week about three times. These plants do not like being exposed to the sun—they must be kept shaded and moist.

Streptocarpus Wendlandii.

Is *Streptocarpus Wendlandii* easy to grow? I have a small greenhouse with heat, but have had very little experience, and shall be glad of your advice.

This curious plant is not particularly difficult to grow. The seed is very small, and must be sown on a finely-sifted surface of soil; and the plants require considerable care and a genial warmth during the early stages. They appear to grow very slowly at first, but after a certain stage has been reached they make rapid progress. Pot them in a light, rich compost of loam, leaf-mould (or peat) and sand, and afford free drainage; they must be shaded from the sun at all times.

Treatment after Flowering.

Would you tell me how to treat *Streptocarpus* after it has done blooming?

When the flowers are over, plants of *Streptocarpus* should receive rather less water, but do not dry them off, by any means, nor yet expose them to more than a few stray gleams of sunshine. During the winter they must be kept barely moist at the root, and in a temperature of fifty to sixty degrees, or never less than forty-five degrees. Divide them carefully, and repot in the spring.

SWEET PEAS.

General Culture.

Adapting Heavy Clay Soil.

Would there be any chance of success with Sweet Peas in a border of very heavy clay? I cannot easily get any mould to lighten it, but can get any amount of old rotted stable manure (very short).

It is not necessary to add soil of any kind, but if plenty of the short manure mentioned, road-scrappings, coal ashes, or burnt material of almost any kind, is added to the staple, and well worked into it, you will be able to grow Sweet Peas or anything else. The seed, however, must be sown in a few inches of fairly light and mellow or fine material.

Autumn or Spring Sowing.

I have some Cupid Sweet Pea seeds over. Is it worth while sowing them in the autumn, to weather the winter, or is it better to keep them till next spring?

If you have a warm and sheltered position, it might be as well to sow a row or two towards the end of October, or in November. When the winter proves mild, these autumn-sown Peas often do very well.

Blossoms Decreasing in Size.

I have had a good show of Sweet Peas so far, and have been cutting the blooms for some weeks. The flowers now seem to be growing smaller. Are the plants outgrowing their strength?

As the plants continue to grow and bloom, the blossoms naturally decrease in size, and this can only be prevented by feeding them well, and keeping the flowers closely cut—if you stop them, you will lose the bloom, for a time at least.

Buds Falling.

Will you tell me what causes Sweet Pea buds to drop off. The stems of the plants are half an inch across, and look very healthy, and the flowers I have are very fine.

The trouble is caused through the growth being over-vigorous, and want of sunshine. It is no uncommon experience. In any shady position, Sweet Peas will grow freely, but they do not flower satisfactorily.

Dwarfing the Growth.

I have sown a row of Sweet Peas at the foot of a close wooden fence, four feet high, and should prefer them not to grow higher, as they would be exposed to a considerable draught if they came above the top. Can I pinch

out the tops of the plants while young, and will they flower as well if they are subjected to this treatment?

Yes, the desired object may be attained by pinching out the tops of the plants, though we should not do this too soon—while the plants are still young, or small; but let them grow to nearly the limit of height—say, about three feet—and then stop. They will then produce a few very fine flowers from the main stems, and subsequently bloom more freely on the lateral growths. The height may also be reduced, to some extent, by making the soil quite firm, and also by giving no liquid manure or stimulants until the plants are well in flower.

Earthing-up Autumn-sown Plants.

I have some Sweet Peas growing, sown in September. If I mould them up for the winter, to protect the first joint, will that grow through the soil in the spring, and will it make the flowering any later?

If the seed is sown shallowly, the plants may be earthed up to a depth of one, two, or more joints with benefit, but the growing points must never be covered. The moulding will not retard the flowering at all.

Fertilisation.

To cross-fertilise Sweet Peas must the flower be opened; if left till flower expands naturally, will it not be too late, self-fertilisation having taken place?

You are quite right. In order to hybridise or cross-fertilise Sweet Peas, the blossoms must be opened before they expand, as the pollen is shed by the anthers previously.

Insect Pests.

My Sweet Peas have become seriously affected with a blight of small green-fly. Could you advise me the most effective way of destroying them?

Syringe the plants once or twice with the infusion of quassia and soft soap. To make, boil a good handful of quassia chips in a quart of water for twenty minutes, stir in a large tablespoonful of soft soap while hot, mix well, and add water to make one gallon. Syringe the plants with pure water an hour or two after using the infusion.

July Flowering.

Could you suggest a time for sowing Sweet Peas, in order that they may be at their best about the middle of July.

The seed should be sown at the end of March, or early in April.

Manuring.

My Sweet Peas are sown in fairly good soil, with a clayey subsoil. I did not add any manure. They are now about an inch out of the ground. Can I apply a fertiliser to them?

It is unfortunate that the soil was not manured before sowing the seed—the best place for manure is down below the plants, where their roots can run and feed in it in dry or hot weather. A very light sprinkling of a good fertiliser may be given along each side of the rows, just pricking it in, or hoeing very gently up to the plants subsequently; this to be repeated occasionally during the summer, but using more of the fertiliser as the plants gain strength. When a foot or so in height, a mulch of half-decayed but littery manure had better be laid along each side of the rows, if the weather is dry, and also give a good soaking of water or liquid manure once a week during drought.

Number in Clumps.

When grown in clumps, how many Sweet Peas should be allowed to each, and how far distant from each other should the plants be placed? If staking with sticks, should these be placed in the centre, and Peas inclined towards them?

To obtain fine, sturdy plants and large flowers, ten or a dozen good plants

are enough for each clump, and better than more. The plants may stand three to four inches apart, with the best results. Place the sticks towards the outside of the clump, or so that the plants can cling to them as they grow.

Old Seed Germinating.

Could you tell me if Sweet Pea seed two years old (that is to say, left from last year's sowing) still retains its germinating power?

If good, sound seed to start with, and it has been kept dry, the seed of last season will germinate, but the growth will not be so vigorous as that of new seed. If you are not very particular, it may answer the purpose, but if you want the best results, new seed should be obtained.

Overhead Syringing Unnecessary.

Do Sweet Peas require syringing overhead on hot days?

This is quite unnecessary, unless, perhaps, the plants are affected with insects, when an insecticide should be used.

Seed True to Colour.

Will you inform me whether seed saved from a row of various named Sweet Peas come true to colour, or get cross-fertilised by insects?

The plants will come as nearly as possible true to the parent plants, as the fertilisation is effected before the blossoms expand, and insects have no effect.

Selection of Manures.

What is the best manure to use for Sweet Peas, and how often should it be given?

There is no real "best" for this purpose. Superphosphate, bonemeal, soot, nitrate of soda, or sulphate of ammonia, as well as animal manures, are all useful, and the best results occur when they are applied in rotation.

Unhealthy Plants.

One or two of my Sweet Pea plants turned quite yellow, beginning in the middle, and gradually ascending and descending. Can you tell me the cause of this, and how I may avoid a repetition of the same trouble?

This will happen sometimes, especially early in the season; the only thing that can be done is to sprinkle a little lime about them occasionally, which will help to keep the soil sweet.

Pot Culture, &c.

Culture in Window Boxes.

I propose growing Sweet Peas in window-boxes, and desire to know whether, if this is possible, a depth of soil to ten inches would be sufficient? Could any other subjects also be grown in the same boxes?

Sweet Peas may be grown in boxes, and a depth of soil of ten inches would be quite sufficient, but the plants will need to be well fed with liquid manure and artificials when coming into bloom. Nothing else could be grown satisfactorily in the same boxes.

"Cupids" in Pots.

In growing Cupid Sweet Peas in "forty-eight" pots, how many should I put in each?

Three plants are quite sufficient for a 5-in. pot.

Flowering in April.

Will you give me a few hints about growing Sweet Peas for flowering in April?

To obtain blossoms of these in April, the seed must be sown, in pots,

about October, and the plants be grown on under glass, and gently forced in the spring—it cannot be done in the open air.

Forcing Impracticable.

I have tried to force Sweet Peas for some considerable time, but with one or two exceptions all fail with me. Can you explain?

Sweet Peas must not be forced at all “hard,” but brought on gently in a moderate warmth during the later stages.

Futility of Plunging Pots.

I understand that a good way to bring Sweet Peas on is to sow them in pots, and plunge in ashes. How long should the ashes have stood in the open before using?

Unless the pots can be plunged in a cold frame, or stood in a cool greenhouse, nothing will be gained by sowing in this way—it would be better to do it in the open ground. If coal ashes are used, they may be used almost fresh, little or no “weathering” being necessary.

Tub Culture.

Will you tell me whether Sweet Peas can be successfully grown in tubs, about fifteen inches high by twelve inches across the top? I want them to stand in a position where they could not be sown in the ground.

Sweet Peas may be grown with great success in tubs, such as those referred to, provided that rich, loamy soil is employed, and that the plants are liberally supplied with water and liquid manure after they have fairly started into growth. It will be better to sow the seed direct into the tubs, which may be kept under glass until the seedlings are up and getting strong, but thin them out well, and do not subject them to too high a temperature.

TECOMAS.

A Good Compost.

I want to grow *Tecoma Smithii*. Will you tell me what soil they require?

Probably the best soil is a mixture of good loam and peat, in about equal parts, with plenty of sharp sand, and free drainage, as the plants require abundant supplies of water when in full growth.

Habit of *Tecoma Smithii*.

Is *Tecoma Smithii* suitable for training to the roof of a greenhouse? What is the colour?

This is a very handsome climber, of vigorous growth, and very free-flowering. It is a hybrid between *T. capensis* and *T. velutina*. The flowers are a kind of orange-red.

How to Train.

I intend growing *Tecoma Smithii* in my greenhouse. Will they require pinching at any stage in their growth?

Do not pinch the plants until they attain a height of several feet, but rather keep each to a single stem.

Pots not Recommended.

What size pot shall I use for the final shift of *Tecoma Smithii*?

If grown in pots, a large size should be employed—10-in. to 12-in. at least; but as a rule the plants thrive best in a well-drained bed of moderate size.

Temperature in Winter.

I have just pricked off seedlings of *Tecoma Smithii*. They are at present growing in heat, but there will not be sufficient space to keep them in same temperature during winter. What is the minimum in which I can successfully winter them?

Tecoma Smithii may be successfully wintered in a temperature of forty-five to fifty degrees.

TROPÆOLUMS.

Culture of *T. speciosum*.

Will you give me some information with regard to *Tropæolum speciosum*?

This plant succeeds best in a cool and shady position, such as the north side of a wall or building. It does well in the North, but not so well in the southern counties. The soil must be light, deep, and rich, and should be kept moderately moist; the roots should be planted in the spring, just as they are beginning to start into growth, but to avoid failures it is advisable to procure small plants started in pots. It is very rarely raised from seed.

Different Species.

What is the difference between *Tropæolum speciosum* and *T. tuberosum*?

Tropæolum speciosum has foliage resembling that of the Canary Creeper, with bright scarlet blossoms, and long, semi-tuberous roots, while the flowers of the other are red and yellow mixed, and the roots are solid tubers. The former likes a warm and sunny position, but the other shade and a cool temperature. Both are handsome climbing plants.

Edible Tubers.

Would you give me some particulars of *Tropæolum tuberosum*? I understand the roots are edible.

This is a summer-flowering climber, from Peru, and therefore somewhat tender. It bears a profusion of flowers of a blending of red and yellow. It should be planted in the spring. It will grow freely in any fairly light and rich soil, and though it will not cling to a wall, it will ramble over a bush, small tree, or rough post. The tubers are quite wholesome, and when boiled form a very agreeable dish.

Raising Seedlings of *Speciosum*.

I want to grow *Tropæolum speciosum* from seed. When should it be sown, and how long ought I to keep it before planting out? I have no glass except a cold frame.

If the seed could be sown in heat in the early spring, the plants would probably bloom a little towards the autumn, but it will be better to sow in the frame in April or May, and endeavour to obtain small roots to plant out next season.

Sowing Canary Creeper.

Will you tell me when I may sow *Tropæolum canariense* and *T. Lobbianum fulgens* out of doors, and whether they prefer a sunny or shady situation.

The seed of both the kinds mentioned may be sown in the open ground, but not before the third or fourth week in April, as they are not hardy; a warm and sunny position is best.

Storing Roots in Winter.

Please tell me if tubers of *Tropæolum tuberosum* should be taken up for the winter, and, if so, what is the best way to store them?

In light soils, and in fairly sheltered positions, it is not necessary to lift the tubers, or roots, of this plant in the autumn, for they are hardy; but if desired they may be taken up as soon as the tops die down, and stored in damp sand or fibre during the winter.

Support Necessary.

Will *Tropæolum speciosum* cling to a wall, or does it require nailing in? Does it die down to the ground in winter?

No; this plant is not self-clinging—that is to say, not to a wall, though if there are some sticks or string it will support itself to some extent. It is quite deciduous, dying down to the ground entirely each autumn.

Tub Culture not Recommended.

Will a *Tropæolum speciosum* succeed if planted in suitable soil in a tub (circular, two feet in diameter), and placed at the foot of the wall forming the north end of a house?

This plant is seldom successful in a tub; it should be planted out. You may try it, but it is very doubtful whether it will do much good.

When to Replant.

Which is the proper way to keep *Tropæolum speciosum* during the winter? I want to replant in March, so thought it would be better taken up before the frost hurts it, than left in the ground.

The roots of this plant are quite hardy, and they had better be left where they are for the winter, and replanted in the spring. If the position is cold, some dry litter may be laid over the roots on the approach of severe weather.

TUBEROSES.**Discard Old Tubers.**

Will Tuberoses which have bloomed well this season do so again next, and, if so, what should be done with the bulbs?

No; the bulbs of this plant are practically useless after having once flowered, and may as well be thrown away. Our English climate is too cold and sunless to enable the bulbs to ripen sufficiently to flower a second time.

Failure in Forcing.

My Tuberoses come up and look splendid till the flowers should open, when, instead of expanding, the buds shrivel and die off. I grow them first in a cool pit, and then bring on into cool house, and finally into heat of sixty to sixty-five degrees. I also give them plenty of water and soot-water.

From what you say, the failure seems to be due to lack of sufficient warmth to enable the flowers to open properly. These are tropical plants, requiring a high temperature and moist atmosphere in all stages of growth, and though they may grow, and even bloom, well, without any artificial heat during the hot weather, they require a warm house during the autumn and winter. Perhaps you give them too much water during the early stages.

Growing Outdoors.

Is it possible to grow Tuberoses out of doors in the summer?

The bulbs may be planted about four inches deep on a warm south border in May, and lifted and potted towards the autumn, when they are coming into bloom. They will then flower nicely in the greenhouse.

Mistaken Treatment.

Last February I potted some Tuberoses in strong loam, and leaf-soil and sand, and placed the pots underneath the stage in a cold house, where they are now. Will you tell me what to do with them?

You went the wrong way to work with these bulbs. They should have been potted in 3-in. or 3½-in. pots, in good, loamy soil—that mentioned is quite suitable—and then have been placed on a sunny shelf in the greenhouse, or in any warm, light place, keeping the soil almost dry until the flower stems begin to rise, when they should have more water. When well rooted, and in growth, move them into 5-in. pots, and grow them on in a warm, close, moist atmosphere.

Starting the Tubers.

I have just potted American Pearl Tuberoses in 3½-in. pots, and plunged the pots in a heat of sixty degrees. Will they want watering once before they start to grow, and should they be kept in darkness?

These are usually stood on a shelf in a warm house to start, and must be

kept almost dry until they begin to grow freely, when they may have more water, and be moved into 5-in. or 6-in. pots soon afterwards, but the hotbed is all right. Water them in once, by all means, and very occasionally afterwards, until in full growth.

Suitable Temperature.

Do Tuberoses object to a moist heat? I have two houses, with minimum of forty-five to fifty-six degrees in winter.

Not at all; in fact, a moist, tropical warmth is just what they delight in.

TULIPS.

Absence of Stem.

Will you inform me why my Tulip flowers have no stem at all? Were they planted too deep?

This is a very unusual fault; and, if the bulbs were sound and good, can only be due either to defective root action (caused by unsuitable soil or undue dryness at the roots at some period), or, possibly, to the use of impure water. If in the open ground, they may have been planted too deep—two to three inches below the surface (above the crowns) is usually sufficient.

Blind Bulbs.

Kindly inform me the reason why Tulips are blind. Many of mine have simply one broad leaf, with no trace of bloom.

The probable cause of this failure is that the bulbs were either too young, or not sufficiently ripened, when planted; they were probably cheap ones, for good bulbs very seldom fail to bloom, unless planted altogether too deeply. They may flower next year if the soil is of a suitable nature, but it is better to lift them, when the foliage dies down, dry, and replant them in the early autumn.

Cutting Blooms Beneficial.

If Tulips are cut when at their best, and the foliage only left to mature and decay, will the bulbs bloom again the following year, or will cutting the flowers before they are withered prevent this?

Cutting the flowers when just expanded will not prevent the plants blooming the next year, by any means; indeed, they will be far more likely to do so than if the flowers were allowed to remain and wither.

English Wild Species.

I purchased bulbs of *Tulipa florentina*, and they produced one strong, healthy leaf apiece, but no signs of flower followed, and the leaves are now withering away. I cannot find the name in any gardening guide; the bulb is not unlike a Filbert kernel.

This is the sweet-scented, wild, English yellow Tulip, also known as *T. sylvestris*. It requires to become thoroughly established before flowering at all freely. The bulbs appear to have been rather small.

Growing-on Offsets.

Should the offsets of Tulips be grown on until they become flowering bulbs? How long will it take?

Yes; the offsets may be preserved and grown on, as proposed. They had better be grown in a box the first year. It will be three or four years before they bloom. You will find it a troublesome business, and it would be better to purchase fresh bulbs.

Height of Species.

Which is the taller, the Darwin or Parrot Tulip?

The Darwin is the taller, averaging at least twenty-four inches in height, against fifteen inches for the Parrot Tulips.

Is Lifting Necessary?

Can I leave Tulip bulbs in the ground to flower next year? I wish to avoid the trouble of replanting them.

You do not state what section of Tulips you have. The "cottage" varieties may remain for several years without being disturbed, and will flower; the Dutch varieties may remain two or three years; and most of the other types may also remain until it is found that the bulbs have increased and become too crowded. When thus left in the ground the bulbs gradually work up to the surface.

Overhead Sprinkling.

My Tulips seem to be all right. Should I water them overhead, or on the soil only, and should anything be added to the water?

Although Tulips and other bulbs enjoy a moist atmosphere, they do not need to be watered overhead to any extent. If the pots are well filled with roots, keep the soil regularly moist, and that will suffice. A little sulphate of ammonia or nitrate of soda, half an ounce to the gallon of water, given about once a week when the bulbs are pushing up the flower-spikes, will improve the latter considerably.

Plunging Advisable.

I have recently potted some Tulips, which I wish to flower in a cold conservatory. Shall I put them out of doors for a time, or will they do all right in the greenhouse if placed under the staging?

The pots ought to be stood on a bed of ashes in a sheltered position in the open air, covering them with fibre, or coal ashes, to a depth of six inches or so. Let them remain here until they have formed plenty of roots, and begun to push a little at the crown, and then bring them into the conservatory.

Remedy for Slugs.

Are Tulips liable to be eaten off by slugs, and, if so, would you tell me of a preventive?

Slugs seldom attack Tulips to any extent, unless very numerous; but should they do so, two or three dustings of lime (fresh), given preferably in the evening, or at night, will banish them, and will not harm the plants in the least.

Sowing Seed.

When is the right time to sow Tulip seed, in the spring or the autumn?

The best and most natural time to do this is as soon as the seed ripens on the plants.

Treatment after Blooming.

How must I treat Tulips when they cease blooming, or to what purpose can I put the ground on which they stand?

If you wish these to be of any use for another season, the plants should be left alone until the foliage dies off. But if you wish to plant the bed with something else before this, plant between them, if possible, or else take them up and replant in another bed of light, rich soil, to ripen off.

VALLOTAS.**Bulbs Decayed.**

A potful of bulbs of the Scarborough Lily have all rotted. I had well manured them. Would this be the cause?

A little well-decayed manure may be added to the soil for large plants, but this is better given in the liquid form during the summer, while the plants are growing. Either too much manure in the soil, or too much water (especially while the bulbs are resting), will cause a kind of decay, but there is also a disease which occasionally attacks them. Lime is probably the best remedy in either case.

Failure of Blooms.

I have some Scarborough Lilies (*Vallota purpurea*) which I repotted in the spring, but they have not flowered this season. Will you advise me how to treat them? I have no greenhouse.

The plants have failed to flower because either the bulbs were not strong enough, or the growth has not been sufficiently ripened—the blooming depends entirely upon this. You might, however, try the effect of standing the plants out at the foot of a sunny wall in the open air for a week or two, and giving very little water—this sometimes induces blooming.

Growing-on Offsets.

I have some *Vallota purpurea* offsets, which I planted about four inches apart in the spring of last year. What should be their treatment, and when can I expect them to bloom?

Offsets planted in boxes last spring cannot be expected to bloom yet; if fairly strong, pot them singly in 3-in. or 3½-in. sizes, and next spring move them into 5-in. pots, when they will probably flower the following autumn. These plants usually flower for the first time in the third or fourth season, from the (small) offsets, though something depends upon the treatment.

Repotting and Dividing.

I have *Vallota purpurea* in an 8-in. pot. It has not been repotted for four years, and has made so many bulbs that they are pushing above the rim of the pot. When is the best time to repot?

The proper time for repotting this plant is in the spring, April being the best month. Either move the plant on, as it is, into a 11-in. or 12-in. pot, or else break it up either into single bulbs, or into smaller clumps, potting these into suitable sizes. We should be inclined to remove a few of the smaller bulbs and place these singly in 3-in. or 4-in. pots, and then give the old clump a "shift" into a 10-in. or 11-in. pot. Large masses are much more effective than single bulbs, but at the same time it does not do to let them become too crowded.

Starting the Bulbs.

I have some bulbs of *Vallota purpurea*, which I want to grow in a window. Should they be plunged after potting? I have no greenhouse or cold frame.

It is not necessary to plunge the pots, but if they can be put into a little bottom heat, with a cool atmosphere, it is beneficial, as it induces roots before they begin to grow. We have seen this plant doing remarkably well in windows.

Suitable Composts.

I have two small bulbs of the Scarborough Lily from an old one which flowered last year. I have planted them in pots in a mixture of peat soil, leaf-mould, and sand. Will this suit their growth?

The light soil described will do for the plants of this Lily—or, rather, *Amaryllis*—for the present, but when getting fairly strong, a more loamy compost will suit them better. Two or three parts of fresh loam to one part each of peat, leaf-mould, and sharp sand, with good drainage, will grow them to perfection.

Treatment after Flowering.

Will you tell me how to manage *Vallota purpurea* after it has flowered? Do the leaves die off like Hyacinths, etc.?

This plant requires no particular treatment after flowering. The supply of water should be slightly reduced as the autumn draws on, but the plants must not be dried off in the winter, the soil being kept, as a rule, in a half-moist condition. Any repotting necessary should be done in April, and when the growth recommences more water should again be given. They should be wintered in a cool greenhouse or sunny window, safe from frost.

Watering in Winter.

Should Scarborough Lily bulbs be kept quite dry through the winter?

Certainly not. These are of an evergreen nature, and, therefore, require a certain amount of moisture at the root at all seasons, though less, naturally, during the winter than when in growth.

VERBENAS.**Compost for Seedlings.**

Please inform me how to treat Verbena seed.

The seed of the Verbena should be sown in a rather rough mixture of loam, leaf-mould, and sand, in a pan or box, in the early spring—February, or the beginning of March—placing it in a warm house or moderate hotbed, and keeping the soil evenly moist. Prick the seedlings off singly when about an inch in height, and, when large enough, pot them singly (in 2½-in. or 3-in. pots), grow on under glass, harden off, and plant out in rich soil towards the end of May. The plants may also be flowered in 5-in. or 6-in. pots.

Leaves Falling.

Does a Lemon Verbena require any unusual treatment? Mine got on well for months, then began to die, going off from the top.

These are deciduous subjects, and die back to a certain extent, and lose all their leaves rather early in the autumn. The best time to put the plants out is in May or June, when sturdy examples will become well rooted out and established before the winter sets in. In the open air they must have a warm south aspect, of course.

Preserving and Propagating.

I have a few Verbenas, which have flowered well; and I want to save them for next year. Do you advise me to take them up, pot them, and winter in a cool greenhouse? I want to take cuttings off them as well.

It will be better to take cuttings of these plants than to trust to the old stools, though these may also be taken up, potted, and wintered in a cool greenhouse. Choose nice, "stubby" sideshoots, about two inches long, and insert them in pots or boxes of light, sandy soil. A gentle bottom heat would be advisable, though not absolutely necessary. You can propagate again from these young plants in the spring, if necessary.

Striking Cuttings.

It appears difficult to take cuttings of Lemon-scented Verbena. I have heard they should be rooted in pure, damp, silver sand.

It is not at all difficult to strike the cuttings of this plant. They must be inserted, in well-drained pots of very sandy soil, surfaced with pure sand, directly they are taken, and at once placed in a propagating frame, or some warm, close place, where, by shading, excluding all but a trifle of air, and sprinkling them occasionally overhead, they can be prevented from flagging—if they once flag they are done for, but, if they keep up, they will root.

Suitable for Carpet Bedding.

Can you recommend something cheap, other than Violas, not exceeding a foot to fifteen inches in height, to serve as a carpet beneath a bed of *Lilium tigrinum*?

Verbenas would be suitable for this purpose, and a few plants cover the ground quickly, especially if seedlings can be obtained; either light or dark purple would go well with the orange Lilies.

Wintering Border Plants.

I have some Verbenas, growing in the borders. I have cut them down to the new growth—will they survive through the winter out of doors?

Verbenas will not survive more than the slightest touch of frost. The

proper place for them is in a frame, but if you have not got one, the plants had better be covered with some light, dry litter, or the like, on the first approach of severe weather.

VIOLETS.

An Unsightly Fungus.

Would you tell me the cause of, and how to prevent, *Æcidium violæ* attacking the leaves of Violet plants? A large number have to be taken off and burnt frequently, but within the last week or so the brown spots have rapidly increased.

There is nothing better for this disease than to dust the plants frequently with lime and sulphur, in powder. Sulphide of potassium would check it, but to syringe the undersides of the leaves of Violets is no easy matter.

Best Method of Propagation.

To obtain young Violet plants for fresh beds, is it better to allow runners to grow on the old plants, and root, or to divide the old plants?

The best plants are those obtained by separating and planting out the rooted runners in April, or the early part of May. Divisions of the old crowns sometimes make good plants, but not equal to those from runners.

Distance between Plants.

How far apart should Violets be planted from each other in the spring, for the annual bed, and how far in frames at the end of the summer?

A strong-growing variety should be planted from fifteen to eighteen inches apart, in the spring; but when planting in frames, it is usual to do so almost as closely as they will go.

Forcing Potted Plants.

Will Dog's-tooth Violets, grown in a pot, stand being forced a little?

Yes; but the forcing must be very gentle, and the plants should not be brought in until the flower-buds appear.

General Culture.

I am thinking of growing Violets. I should be glad if you could tell me how to manage them.

The proper management of Violets commences in the spring—April or early May—when the newly-rooted runners must be separated and planted out in a bed of well-worked and manured soil. They should be kept well supplied with water in dry periods during the summer, and about the end of September, or early in October, the plants must be lifted, each with a good ball of soil, and planted closely in the frames. They should stand quite near to the glass, and have abundance of air whenever the weather is not actually freezing outside. Give water as often as the soil becomes moderately dry.

Half-formed Flowers.

I have a number of young Violet plants, which flowered in the usual way in the spring. Since about the middle of May they have been producing tiny, half-formed flowers. These do not develop, but wither, and leave seed-pods. The plants are, even now, full of them. Will the regular autumn flowering suffer in consequence?

This is quite natural. The small blossoms described are the female flowers, from which the seed is produced. They are produced much later than the large male or barren blossoms, which appear during the winter or spring. Unless you wish to obtain seed, the pods should be picked off, as their production weakens the plants, of course.

Height of Frames.

I intend to build some brick pits or frames for Violets. What height ought they to be at the back and front?

If the Violets are to be planted on a cold bottom, the pits may be about fifteen inches deep in front, and two feet, or a little more, at the back; but if any manure is to be used, they must be built higher, of course.

How to Apply Manure.

What would be the best way to manure a bed of Violets?

Top-dress with either well-decayed manure or leaf-mould in the early summer; but to give the best results, these subjects ought to be divided and replanted annually.

Lime or Chalk?

Will air-slaked lime have the same effect as chalk on Violets? I know they grow wild in profusion in chalky districts.

A chalky soil is not necessary to the successful cultivation of Violets. A little lime would prove beneficial, no doubt, as it gradually passes into chalk, but as a fertiliser a small quantity of bonemeal would be better.

Maggots in Leaves.

My Violet plants have done well for some time; but recently they have been attacked by a minute insect, which seems to have eaten into the tissue of the leaves, leaving unsightly marks. Can you tell me what it is, and how to check it?

The insect is allied to the Celery-fly (*Tephritis onopordinis*). The fly lays its eggs just beneath the skin of the leaf, and the maggots eat their way in what is known as the parenchyma, or substance of the leaf. All that can be done is to pick off all the affected leaves and burn them, dusting the plants well with soot, or lime, and sulphur. This should be done directly the attack is perceived.

Manure in Moderation.

Do Violets require much manure? I have a lot from fowl-houses.

In order to grow Violets well, a moderate quantity of manure should be worked into the soil, but if made too rich it would promote a too vigorous growth. Fowls' droppings forms an excellent manure, especially on heavy soils.

Outdoor Cultivation.

Please say the best time to procure and plant Violets for outdoor cultivation.

The best time to plant is in April, when the smallest rooted runner will make a fine flowering plant by the following spring; but, if strong plants or clumps can be obtained, these, planted in a sheltered spot, in September or October, will flower well during the following winter and spring.

Potting-up for Winter Blooming.

Would Violets bloom in winter, if potted up? I have some very healthy ones out of doors, and I should like them to bloom inside.

Certainly. Lift and pot the plants carefully towards the end of September, or early in October, and when housed, give them plenty of light and fresh air, but little or no heat.

Preparing a Frame.

Will you tell me how to prepare a bed for Violets in a frame?

It is generally considered best to put the frame, intended for this purpose, on a gentle hotbed, placing six or eight inches of good, light, loamy soil in the frame, with some rough siftings, or something of the kind, beneath, so as to bring the surface up to within about six inches of the glass. But if the

locality is mild and the position sheltered and sunny, the bottom heat may be dispensed with, placing the frame on the ground, and filling in first some rough stuff for drainage, and then the soil, as above.

Red Spider and the Remedy.

Towards the end of the summer my Violets had the red-spider in them very badly. I took off the bad leaves and burnt them, and also sprayed the plants, but the spider is just as bad as ever. Could you tell me what would stop these insects?

Violets are liable to be attacked by the red-spider during the summer, especially on a sunny aspect. The best preventives are to keep the soil regularly moist, and to syringe the plants overhead frequently in bright weather. If they are taken up and placed thickly in frames, they may be dipped overhead in the soft soap and sulphur infusion, or any good insecticide, when taken out of the ground. There is no absolute remedy, and on the principle of prevention being better than cure, if the plants are kept regularly moist, there will probably be no red-spider.

Treatment of Pot Plants.

Kindly let me know how to treat Dog's-tooth Violets as pot plants, namely, what soil and quantity of water at different periods of growth.

The Dog's-tooth Violets should be planted in the early autumn, in either pots or pans; place the roots about two inches deep, using any good, light, loamy soil, and place them in a cool frame or pit, keeping the soil just moist during the winter, with more water as the growth appears and the bloom-stalks rise.

Weakening Effect of Runners.

Should runners be removed as they form during the winter on Violets planted in a frame, or will they flower if left to grow? Runner formation was prevented throughout the summer.

The runners will not flower for a long time, and should be picked off as far as possible, as they only weaken the old clumps. It is quite right to keep the runners removed during the summer, for the same reason.

Wintering in the Open.

I have some Violet plants; they have done well in the open. Will it be necessary to take them up and put them in a cold frame during the winter? We are exposed to strong, cold winds at all times. If I keep them out, would it be a good thing to put some straw between the rows of plants?

If the plants were required for winter flowering, it would certainly be advisable to place them in frames, but as they are not wanted to bloom until the spring, it will be better to leave them alone. A little straw may be laid between the rows, but they are quite hardy.

WALLFLOWERS.

Distance Apart.

How far should Wallflowers be planted apart to look a mass of bloom in the spring?

If the plants are bushy and strong, place them nine or ten inches apart, or if small, six or seven inches will do.

Frost-bitten Plants.

When Wallflowers have been nipped by the frost, if they are still green, will they spring up again?

This is very doubtful, and depends to what extent the plants have been frosted. If the tops do not pick up again after the frost has gone, the probability is that they are done for, for this season, at any rate.

Lanky Seedlings.

I have grown Wallflowers from seed, and transplanted them. I am told the tops should have been picked off. The plants are lanky, but only about four inches high out of the ground, and do not seem to be breaking out of the sides so as to make bushy plants.

As a rule, Wallflowers should not be stopped, but as yours are lanky they may have the points taken out, though this will make them bloom very late.

Late Transplantation.

Why should the lower leaves of autumn-blooming Wallflowers, recently transplanted, fall off in such quantities? Several plants were in flower (and all in bud) when shifted.

The cause of this is probably that the plants were moved too late; they should have been transplanted in September, before the huds appeared. Take them up with a trowel, and plenty of soil on the roots.

Manuring the Beds.

Should beds be freshly manured before putting Wallflowers in?

As a rule, it is not necessary to manure the beds at all heavily, a moderate quantity of leaf-mould, or old hotbed manure, with some burnt earth and a little soot, being usually sufficient.

Pinching-out Unnecessary.

I sowed some Wallflower seed, which has now made fine young plants, but I find young shoots coming out from the sides of stems. Should I let these grow, or pinch them off?

Do not pinch out the lateral shoots referred to; most of them will bloom in due time, following the central spike.

Protecting in Winter.

What winter protection is required for a bed of German Wallflowers for spring blooming?

None whatever, unless very severe weather approaches, when a little dry litter or straw may be scattered over the plants.

Treatment after Flowering.

Ought Wallflowers, after blooming, to be cut down and trimmed, so as to make nice young wood for next year?

The plants may be trimmed up a little after flowering, but do not cut them back severely, or they may die off. Young plants are usually employed at the present day.

When to Sow.

At the end of July I sowed some seeds of Wallflowers. They are now up about an inch above the ground. When must I transplant, or can they remain out in the open in their present position?

You were rather late with Wallflowers. They should be sown about the middle of May, or early in June, and some sow earlier. If the seedlings are crowded, they should be bedded out in a sheltered place, and may remain until early in the spring before planting them where they are to flower.

WATER LILIES.**Changing the Water.**

How often should the water in a tub containing Water Lilies be changed? Give water every few days, as required, though the best plan is to have a constant stream, if only a "trickle," passing through the tub.

Ducks and Plants.

Can I expect to successfully grow Water Lilies in a pond partly shaded by overhanging trees, on which I have ducks?

These should do well in your pond, and we do not think the ducks would destroy them, although it would be as well to give them some protection until they are well established.

Goldfish in Ponds.

I think of putting some goldfish in a tub where *Nymphæas* are growing. Will they injure the plants or spoil the water?

Goldfish would tend to improve the water, we should say, and would not injure the plants; but, unfortunately, they do not like sun, and the *Nymphæas* must be exposed to it.

Growing in Tubs or Barrels.

What size and depth of barrel is required for growing *Nymphæas*? Must it be let into the ground up to the top?

Ordinary paraffin casks cut in two will grow small or young plants of most of these Lilies well, though if rather larger receptacles can be employed so much the better. They should be sunk in the ground nearly, but not necessarily quite, up to the rims, and must be kept constantly full of water. A rather heavy loam is the most suitable description of soil to use.

Hard or Soft Water?

In filling a tub for Water Lilies, must rain-water be used, or will the ordinary tap-water do? If the latter, how can it be softened?

Either rain or tap water will do, though the former is preferable; the other cannot be softened satisfactorily.

Number of Plants to Grow.

How many Water Lilies would you grow in a four-foot-square tank?

A single plant of a fairly strong-growing variety, or two or three of the smaller sorts, would suffice for a tank about four feet square. Put a foot of good, loamy soil in the bottom, and put the plant out in a slight mound in the centre. Half a dozen newts might also be added, and a few stones placed for them—the latter would help to keep the Water Lilies in place.

Preserving Woodwork.

Would a coat of glue do for a water-resisting preservative for the wood of a tub or box in which to grow *Nymphæas*?

Neither glue nor paints of any kind must be used; the best plan is to just char all the woodwork inside, or else to give it a good coat or two of Portland cement.

Preventing Stagnant Water.

During the hot weather, the water in my tank began to look bad. What can I grow with the *Nymphæas* to prevent this?

We are not aware that any particular plant possesses the power of keeping water sweet. Newts, however, are generally believed to do so. But the best thing is never to let the water become stagnant; if there is only a slight trickle there will be motion.

Raising from Seed.

Would you give me some help as to the treatment of Water Lilies grown from seed. I have slow, running water, or could bring them on in a cold greenhouse.

If seed can be obtained, it should be sown, either when ripe or in spring, in pans of sandy loam and leaf-mould, and be placed in a greenhouse or pit, keeping the soil constantly moist. When large enough, pot the seedlings off singly, giving plenty of root-room, and keeping them standing almost con-

stantly in water. By the next spring they ought to be strong enough to plant out, placing them in baskets of rich and rather heavy soil, weighted with stones, and sunk in the pond or stream.

Renewing a Pond.

Will you tell me how to improve a bed of white Water Lilies? They were planted twenty-five years ago, in a pond of still water, about four feet in diameter. They flower freely, but are small, and do not cover more than half the pond. What other flowering-plant can I grow that would not affect gold-fish?

The Lilies are probably becoming exhausted, having been growing in the same place for so long a time, and the soil and plants need to be renewed. The pond should be emptied, all the old soil removed, and replaced with fresh material—heavy loam is best; then divide the old roots, and plant some of the best pieces in the bottom of the pond (keeping them in place with a few large stones, if necessary), and then let the water in again. There are now many beautiful hardy Water Lilies of various colours. Some other good water plants are *Aponogeton distachyon* (the Water Hawthorn), *Calla palustris* (the Bog Arum), *Caltha palustris* (Marsh Marigold), both double and single, *Menranthes trifoliata* (the Buck or Bog-Bean) (white, very beautiful and fragrant), *Sagittaria japonica*, and *Sagittifolia*, etc.

When to Transplant.

Can you tell me the right time of year to transplant Water Lilies from one pond into another?

This should be done in the spring—towards the end of April or early in May.

WISTARIAS.

Cultural Directions.

Will you give me some instructions on *Wistaria sinensis*? This is a clayey soil, and the aspect is southern.

The culture of this plant is extremely simple. It is perfectly hardy—though it enjoys a sunny position—and usually succeeds better on a clayey soil than any other, though the border should either stand fairly high and dry, or else be well drained. Plant in the autumn or early spring, and train as many branches as there is room for, horizontally, at a moderate distance apart; these will bloom freely on short lateral shoots.

How to Propagate.

Can I take cuttings of a *Wistaria* which is now in full bud?

This plant may be propagated by means of cuttings, which should be taken in the autumn, but the best way is to layer one or more of the shoots, bringing them down to the ground, notching them, and pegging them down firmly. This also should be done in the autumn.

Need for Root Pruning.

A *Wistaria* has grown most vigorously, and is now thirty feet or more high. It only flowered once, a few years ago, and then only one or two clusters. Its roots are in a flower border, which is regularly manured. Can you tell me why it does not flower.

The soil in the border is probably too rich, and not firm enough to suit the *Wistaria*. Keep the manure away from the roots, as far as possible, and give the plant a good root-pruning every autumn until matters improve. If very thick, the top should be thinned out moderately as well.

Poverty of Soil.

I have a *Wistaria* which never flowers. It has been planted ten years, and has a long, smooth stem, about six feet high; the leaves commence at that

height, and twist round the porch. I have been advised to try root-pruning. Do you think that will do any good, and, if so, what is the best time of year to have it done?

Unless this plant grows very vigorously, it would hardly be advisable to root-prune it, and it is more likely to require a little feeding. Put a mulch of littersy manure all over the roots (this can be covered with a little soil, if necessary), and throw a few pails of water or liquid manure on the border occasionally during the summer. If there is little or no lime in the soil, apply some, also.

Training as Standards.

I have a white and a blue *Wistaria*; can I train them as standards, eight feet high, and how?

This may be done by taking up a straight stem to the required height; then stop it (or cut it off), and stop the topmost sideshoots until a good head has been obtained. But this plant is really a climber.

Tuberous-rooted *Wistaria*.

Is the tuberous-rooted *Wistaria* as fine a plant as the *Wistaria* proper?

Apios tuberosa is the proper name of this plant. It is very distinct from the *Wistaria chinensis*, which is so well known. The *Apios* is a hardy climbing perennial of slender growth, the flowers are of a brownish-purple, and produced in axillary racemes. It must be grown in a sunny position, in a light, warm soil.

YUCCAS.

A Question of Blooming.

Do *Yuccas* only bloom once in twenty years, or is it that they do not bloom until twenty years old?

The *Yuccas* are hardy subjects belonging to the Liliaceous order of plants, and nearly allied to the *Dracænas*. They seldom bloom when less than ten or twelve years of age, and occasionally die after flowering.

Diseased Stem.

I have transplanted a *Yucca*, six feet in height, and, after cutting away the dead and poor stuff, it presents a fine and thoroughly healthy appearance. But a few inches above the root something has attacked it, the stem there being soft, and covered with a fine, bright green mould, while the bark is rotting and breaking away from the place affected. The affection seems more of a dry rot than wet. What can I do, please?

All that can be done is to cut away the soft or diseased portion, and apply plenty of fresh or quicklime; there is nothing else.

General Treatment.

Will you advise me as to the treatment of the *Yucca*? I am about to rearrange my garden, and this will necessitate the *Yucca*'s removal to a new position.

No special treatment is required for *Yuccas*, but they succeed best in good, deep, loamy ground. It takes some years to establish a large specimen, and, after they once flower, several years elapse before they make a new growth strong enough to flower again. After flowering, the main growth is succeeded by sideshoots. This refers to *Yucca gloriosa*. *Y. filamentosa*, which has long hairs on the margins of the leaves, does not grow so strong, but flowers freely. It is best moved in October or early November, but if done carefully, the work may be carried out at the beginning of spring, if the weather is mild. Dig out wide, so as to get all the roots possible, being careful not to bruise them.

Protecting against Severe Weather.

Will Yuccas winter out of doors in the Midlands, without any protection?

Yuccas are quite hardy, but if the weather promises to be very severe, you may put some ashes or litter round the stems if you like.

Removing Dead Leaves.

May I remove the dead leaves from a Yucca without injuring the plant?

Certainly; the dead leaves are not only very unsightly, but will be much better removed than left on the plant.

Soil for Potting Suckers.

What is the best soil to use for potting suckers of the Yucca?

Use a mixture of fresh loam, with half the quantity of leaf-mould and plenty of sand.

Transplanting Suckers.

Should Yuccas, of which four have grown round the old stock, be transplanted?

The suckers or young plants which come up round the old stems are frequently left, but if taken off, and planted separately, they do better; this may be done in the early spring.

Wintering a Pot Plant.

My Yucca is at present standing out of doors in a pot—will it be advisable to leave it out thus through the winter? No glass.

Most of the Yuccas are hardy, but it would not be advisable to leave a plant in a large pot out of doors during severe frost, as the pot would probably split. It should be removed to some light, frost-proof place indoors.

MISCELLANEOUS.

Under this heading will be found questions and answers relating to a number of plants not mentioned separately in the body of the book.

Achimenes in Baskets.

Should the dormant hulbs be planted direct into the baskets, or do they require to be started first?

Start the corms in shallow boxes of light soil, and when the shoots are about two inches long, transfer them to the baskets.

Acorn in Water.

Which is the right way to place an Acorn in water in a small glass vase? Do the roots come from the cup end, or the pointed end?

The roots proceed from the blunt or "cup" end, not from the point. The Acorn should be placed in an upright position in the vase, with its base nearly touching the water.

Almonds not Flowering.

I have some Almond trees which have been planted for five years; at first they bloomed very well, but for the last two seasons have had no flowers at all. They are ten feet high, and very green and bushy. They are in very good soil. What is the best treatment?

These trees probably require root-pruning; a very rich soil is not necessary.

Amorphophallus Rivieri.

What is the most suitable soil, and correct time of potting a bulb of *Amorphophallus Rivieri*?

Any light, loamy soil will do, or a mixture of about three parts of loam, with one part each of leaf-mould, well-decayed manure, and sand. Pot it in the early spring, about February, taking care that frost does not reach the bulb during the winter. It may be grown throughout in a $7\frac{1}{2}$ -in. pot.

Anchusa italica.

Would *Anchusa italica*, Dropmore variety, succeed in an ordinary suburban garden? Are there any special points in its culture?

This is a very vigorous subject, and should do well in an ordinary suburban garden. Give it deep, rich soil, and an open and sunny position. Plant in the spring—about April. It can also be raised from seed.

Anthericum.

How should I treat bulbs of St. Bruno's Lily and St. Bernard's Lily? They are at present sunk in pots in the open ground. Should they be brought in?

These plants are quite hardy, and will do better in the open ground than in pots, but, as it is, they had better be kept in a frame, pit, or cool house, over the winter, and be planted out in the spring—early April.

***Aubrietia* Pruning.**

Is it advisable to cut off last season's straggling growth of *Aubrietia*? When should it be done?

Yes; this should be done after flowering.

Bignonias.

I have two *Bignonias* which have not flowered since the first year of sowing. They are in a greenhouse. Will they do out of doors?

Yes, most of the *Bignonias* succeed on sunny walls in the open air, but they should be protected in some way during the winter.

Box for Edging.

My Box edging is in some places two feet high, and flourishing, but there are many gaps. What should be done to reduce and equalise matters?

The usual course is to lift the Box, pull it to pieces, cut off the old stumps, and replant the best pieces, each with a few roots, much deeper than before, this being done in the spring, but as the plants are so tall, it may be necessary to take cuttings, which should be done earlier.

***Calochortus* in Pots.**

I have planted some bulbs of *Calochortus amœnus* and *venustus*, one bulb in a 4-in. pot, and three in a 5-in. pot. The compost consists of three parts turfy loam, one part each of leaf-mould, sand, and old decayed manure, and a dash of patent manure. Will they be all right in a cold greenhouse?

The soil will do nicely, but you have given them rather large pots; three in a 4-in., and five or six in the 5-in. pot, would have been better. Keep the pots cool, and the soil just moist. They may be plunged in ashes and covered with a little Cocoanut-fibre or moss till growth appears; but this is not absolutely necessary if the pots are stood on a cool, moist bottom in a cold house.

***Centaurea* Propagation.**

In a border I have some plants of *Centaurea candidissima*. How can I propagate them?

Cuttings may be taken after flowering, inserting them in good-sized pots, or in boxes of light, sandy soil, and keeping them moderately close in a frame, or pit. The young sideshoots from the base of the plants make the best cuttings, and should be taken off with a "heel" apiece. Make the soil quite firm about them, and keep them just safe from frost during the winter, though they are practically hardy.

Clarkias.

I have some seeds of *Clarkia elegans rosea*. What sort of flowers are they?

The Clarkias are very pretty hardy annuals, the one you have bearing double pink blossoms on plants about two feet high. Sow in spring, in the open ground, and thin out to four or five inches apart.

Cockscombs Forming too Soon.

Although my Cockscombs are only in 2-in. pots, the majority of them are forming combs. If I pot them on at once, will they make good plants, or are they spoiled by forming combs while so young?

These plants usually begin to show the combs while in quite a young state, and these become more and more developed as the former grow. If potted on at once they will probably do well provided that the plants have not been allowed to go too far, and become root-bound and starved in the small pots. To obtain combs of the largest size, it is always advisable to pot the plants on as fast as possible, so that they do not show the combs before the 3-in. or 3½-in. size pot is reached.

Colchicum Culture.

I have some bulbs of *Colchicum autumnale*, and shall be obliged for information as to their culture.

These bulbs are best planted in the early spring, but it may be done later. Put them in any good, loamy soil, in an open position, with the crowns an inch or two below the surface. If they are strong, they will push up and bloom in due season. Subsequently leave them alone.

Coreopsis Seedlings in Winter.

I have some healthy perennial *Coreopsis* seedlings planted out in beds. Will they stand the winter in their present position, or must they be protected in frames?

Coreopsis lanceolata is quite hardy, and will stand the winter almost anywhere, but the newer *C. grandiflora* is not so robust, and though it might stand all right if the winter was mild, we would rather have it under glass.

Cornflowers Diseased.

My Cornflowers are attacked by "rust." In some cases half the plant is blooming freely, while the other half is diseased. What can I do for this?

Your plants are attacked by a fungoid disease analogous to that affecting the *Chrysanthemum*, *Hollyhock*, etc. Cut away all the affected shoots, or branches, and spray the rest with a solution of sulphide of potassium (not sulphate), of the strength of half an ounce to each gallon of water. Use a very fine rose, and give just enough to cause the foliage to begin to drip, then stop. Repeat if necessary.

Croton Cuttings.

Please tell me the best way to propagate some cuttings of Crotons? I have them in water at present, in a temperature of forty-five to fifty degrees.

Crotons are tropical or "stove" plants, requiring a high temperature at all times. The correct method of striking cuttings is to insert them singly in small (2½-in.) pots of light and very sandy soil, and plunge these in a propagating frame with a bottom-heat of eighty to eighty-five degrees, covering them with glass, and keeping regularly moist and shaded. When rooted, remove them from the frame, but still keep in a temperature of sixty-five to seventy degrees or more, and moderately moist. It is useless to attempt to strike the cuttings in a low temperature.

Crown Imperials and their Culture.

I have received a bulb of the Crown Imperial. Please describe its character, and tell me how to grow it?

Crown Imperials are vigorous-growing plants of a Lily-like character, with

large, drooping bells, produced near the top of the stem, with a whorl or crown of leaves above the blossoms, which are of varying shades of yellow, orange, red, etc. They are easily grown, but like a well-drained soil and a rather sheltered position; they attain a height of about three feet. The bulbs should be planted in the early autumn.

Daisies Transplanted.

Will self-sown seedlings of double Daisies stand the winter, and bloom in spring, if transplanted in autumn?

If the seedlings are large enough, they may be transplanted, and should come through the winter and bloom well. If small, prick them out in shallow boxes, and keep them in a cold frame till spring.

Diplacus glutinosus.

Is *Diplacus glutinosus* intended for greenhouse or outdoor culture, and to what height does it grow? I have it in a "thumb" pot at present.

This plant is very easily grown, and requires little more care or attention than an ordinary *Geranium* or *Fuchsia*. It is really a cool greenhouse subject, but makes a capital window plant, and may be put out in the open ground, at the end of May, for the summer, choosing a warm and sheltered position. If the pot is well filled with roots, and the plant growing a little, move it into a 3½-in. or 4-in. pot at once, using a rather light compost of loam, leaf-mould, and sand, made fairly firm, and water moderately. It may be moved into a 6-in. pot next spring. It grows from eighteen inches to two feet high.

Edelweiss in Gardens.

How and on what soil can Edelweiss be grown? What lime is used for mixing with the soil?

This is not an easy plant to establish in the garden. The chalky loam from the downs would suit it best. Old lime and mortar rubbish may be mixed with ordinary loam, and plenty of rough stones or chalk put beneath as drainage.

Eremurus Culture.

Kindly tell me how to treat *Eremurus himalaicus*. None of mine have flowered. One sent up a long stalk and then dried up; the others only had leaves.

These are hardy, or very nearly hardy, plants, with tuberous roots. They should be planted in a deep and rich, yet fairly light soil, and a sheltered position is also desirable. In cold localities it is advisable to cover the roots with some dry litter or straw during the winter. Perhaps the plants become too dry in the summer, and need water or liquid manure—the shrivelling of the one flower-stem points to this.

Eucomis punctata in Pots.

I have been growing *Eucomis punctata* in pots with about one-third of the bulb exposed. Is this correct?

When grown in pots, the bulbs may be safely planted as you describe, but they do better in the open air, planting them five or six inches deep in a sheltered, sunny border of light soil. When once planted, leave them alone.

Euonymus Bare at Bottom.

I have a hedge of *Euonymus*, which has become quite bare below. I want it furnished from the ground upwards. How should this be done?

This plant is very apt to become bare at the bottom, in course of time, or when the plants become old. This is frequently the result, however, of allowing the plants to run up too quickly at first—if kept well cut back during the early stages the hedge would be better furnished. All that can be done now is to cut it down quite low—to a foot or eighteen inches, say, and let the plants break again.

Funkias Divided.

I wish to divide a large clump of Funkias. Please tell me the right time and correct method?

This operation is best performed in the spring, early in April; but it may, if necessary, be done in the autumn—September, or early October. Take up the plant, cut or pull it into pieces with from one to three crowns or "leads" apiece, and plant these out firmly in well-prepared soil.

Galegas.

What is the best way to propagate Galegas? I have some exceptionally fine plants.

These plants may be increased by means of cuttings of the young shoots struck in sandy soil, or they may be raised from seed, the latter making much the better plants.

Gerbera Jamesoni.

Would you tell me the habit of the *Gerbera Jamesoni*, or Barberton Daisy? Does it die down entirely in winter? I have only a cool greenhouse (no heat), so carry the pot into the sitting-room at night.

This plant has large orange-scarlet blossoms, and grows about two feet high. It is really a hardy perennial, but likes a warm and sunny position, or a cool greenhouse. It dies down to a certain extent during the winter, but seldom fails to push up again in the spring. Take the plant indoors at night only during actual frost.

Ginger Plant.

Please inform me the proper treatment of a Ginger plant? Should the last year's flowering-stems be cut off?

This plant (*Zingiber officinale*) requires the warmth of a well-heated stove, or warm greenhouse, with plenty of water while in full growth and bloom, and to be kept on the dry side when at rest; cut the old stems away by all means.

Godetias in a Town Garden.

Are Godetias suitable plants for a town garden? If so, should they be raised in a frame?

In a sunny position these plants will do well in a town garden. They do best when sown in the beds where they are to flower, without transplanting. The seed should be sown broadcast, thinly, and the little plants thinned out to six inches or eight inches apart when up.

Gum Cistus from Cuttings.

When can I take cuttings of the Gum Cistus?

The Gum Cistus (*C. ladaniferus*) is one of the Rock Roses. Cuttings may be taken in May, placing them under a handlight, or in the autumn in a cold frame. Something like fifty species and varieties are known to botanists, but less than a dozen are in general cultivation.

Hamamelis and other Witch Hazels.

Is *Hamamelis japonica arborea* as free-flowering as others of the Witch Hazels? Can I by pruning increase next year's amount of bloom?

This species of *Hamamelis* is very free-flowering, and may be regarded as the finest of all. A little judicious pruning is advisable, but if you cut out too many of the young shoots, there will be a paucity of bloom in the future.

Helianthemums Cut Back.

Will you tell me if last season's growth of *Helianthemum vulgare* and vars. should be cut off, and when this should be done?

These plants require very little pruning, as a rule, but if cut back at all it should be done in the spring.

Heracleum Culture.

I have some small plants of *Heracleum giganteum*. What treatment should they have?

These plants are by no means particular as to soil, but they attain their greatest dimensions in one that is moderately light and rich. Keep them well supplied with water while they are growing.

Hyacinthus candicans not Quite Hardy.

Can I leave the bulbs of *Hyacinthus candicans* in the ground all the winter?

Unless the soil is very light, warm, and well drained, it is much better and safer to lift the bulbs each autumn, and dry and store them for the winter. Replant in March or April, one to two feet apart.

Incarvillea Delavayi from Seed.

How long do *Incarvillea Delavayi* usually take to bloom from seed sown in the open? What is the general method of propagating the plants?

These plants belong to the family of Bignonias. If the seed is sown in good time one season, the plants ought to bloom the next. They enjoy a deep, warm sandy loam, with a sunny and rather sheltered position, and are usually propagated by division, or by sowing seed.

Iresines for Bedding.

Are the *Iresines* (summer bedding plants) hardy annuals, and how are they propagated?

These are tender herbaceous perennials, and are propagated by means of cuttings in the spring; seeds are seldom (if ever) to be obtained. The old plants, or autumn-struck cuttings, must be wintered in a warm house, and the cuttings be taken a little later on, inserting them in sandy soil, in a hot-bed or warm house.

Ixia Culture.

When, and in what soil, should *Ixias* be potted?

Pot the *Ixias* in autumn, six or seven in a 5-in. pot, using any good, light, loamy soil, with some sand, and plunge them in ashes in a cold frame until the bulbs begin to grow. Keep the soil dry until the growth is well advanced. These plants are usually seen at their best in a warm and sheltered bed of light, rich soil in the open.

Justicias and their Treatment.

Please tell me how to treat a *Justicia*. Would manure-water be good for it, the pot being full of roots?

The culture of this plant is very simple. Young plants are the most satisfactory, and should be firmly potted in good, loamy soil, with a little peat or leaf-mould added. Rather free supplies of water should be given while the plant is in full growth and bloom, with some weak liquid manure about once a week after the pots are well filled with roots. It flowers towards the end of the summer, or sometimes in the autumn or early winter, if struck or stopped late. The flowers are of a soft rose or pink colour, and are produced in a close spike; it requires the temperature of a cool stove or intermediate house to do well, though we have grown it in a warm greenhouse.

Kalosanthes Culture.

Will you let me know the treatment of the *Crassula*?

This plant, which is now generally known by the name of *Kalosanthes*, belongs to the Cactus tribe, and requires very similar treatment. The plants should be firmly potted in a porous compost of loam, leaf-mould, crushed mortar, and sand. They need plenty of water during the summer, but should be kept almost dry in the winter. They are increased by means of

cuttings off the tops, or sideshoots, inserted in pots of sandy soil in the spring or summer; they strike very readily.

Kniphofia.

Ought I to cut down the leaves of my Red-hot Poker plants, which are growing in the garden.

The leaves of this plant should not be cut down at all as long as they remain green, but when they become brown and dead cut them off, or pull them out, at once.

Lantanas.

Will you give me the treatment of Lantanas, both summer and winter—when to take cuttings, whether of the new or old wood, and the soil to grow them in?

There are very few greenhouse or bedding plants that require so little attention and care as the Lantanas. During the summer they may be either planted out of doors, in any fairly good soil, or be grown in 5-in. or 6-in. pots, in the greenhouse or window, and through the winter they should be kept in a cool greenhouse, a window, or anywhere, so that frost cannot reach them, with just enough moisture to enable them to retain a few leaves, and prevent the wood from shrivelling. Cuttings of the young sideshoots, about two inches long, strike readily in sandy soil and a gentle warmth, in the spring; take them with a "heel" apiece, or close to the old wood, if possible. The plants will grow in almost any fairly good soil, but the best material is a good, sound loam, with a third or fourth of leaf-soil and a little sand, the whole made quite firm, with good drainage. Plenty of water and liquid manure is necessary while the plants are in growth and bloom.

Libonia floribunda.

Will you give me advice as to growing *Libonia floribunda*? Do they like much water or sun, and are they better in a cool house or out of doors?

This easily-grown, cool greenhouse plant, should be quite firmly potted in a light, loamy soil, with a little leaf-soil or peat added, and free drainage. Potting should be done in the spring, immediately after flowering, but thinning out some of the weaker growths and trimming the plants into shape generally. After potting, keep them in the greenhouse for a month or so, watering carefully until the pots are getting full of roots, and shading lightly, but syringe them frequently overhead. When growing freely again, stand them out on ashes in the open air, unless the greenhouse is in a very open and sunny position, and is freely ventilated, when they may be kept inside, but always near the glass, or in full light. The *Libonia* is a thirsty subject, and when the pots are full of roots they require to be watered twice or thrice daily in hot weather.

Maidenhair Tree.

Please describe the appearance of the Maidenhair Fern Tree, and also tell me its height, etc.?

The foliage of this tree bears a considerable resemblance to the fronds of the Maidenhair Fern, hence the name. It is a coniferous plant, hardy, and reaches a height of twelve to fifteen feet, or so. Its proper name is *Salisburya adantifolia*.

Mandevilla suaveolens.

Is *Mandevilla suaveolens* an outdoor or indoor climber, and what soil should I require for it?

This charming plant is a cool greenhouse climber, succeeding best when trained over the roof. It is useless in the open air, and as it does little if any good in a pot, it should be planted out in a well-drained border in a soil consisting of good fibrous loam and peat, with a small proportion each of charcoal and old mortar (crushed), and sand. Make the soil firm, and be careful in watering at first.

Marigolds from Seed.

Which seed of African and French Marigolds should I save—that from double or single blooms?

If you wish to have fine double flowers, the seed must be saved from the most fully double and well-formed flowers there are—these should be marked when expanded. If you save seed from the single flowers you will get nothing but single blossoms again.

Marvel of Peru.

What is the best way to grow Marvel of Peru (*Mirabilis jalapa*) from seeds, and also to keep the roots through the winter, and start them for the next summer?

This plant is easily raised from seed, and if this is sown in a gentle hotbed or warm house in the early spring, the plants will flower freely the same summer. Sow thinly in pans or boxes of light, rich soil, place in a moderate hotbed, and keep moist. When the little plants are two inches high, transfer them singly to small pots, grow on, and plant out of doors about the end of May. The tuberous, Carrot-like roots are easily preserved through the winter, like Dahlias, in any frostproof place, though, to prevent shrivelling, it is as well to store them in half-moist sand, or Coconut-fibre. When once established, the plants seed, and reproduce themselves freely.

Monkshood.

Should Monkshood roots be stored through the winter, and what kind of soil do they thrive in?

The roots of these plants (*Aconitum*) are perfectly hardy, and may be safely left in the ground for the winter. Any good garden soil will suit them, but it should be deep and well manured.

Mother of Thousands in Winter.

What is the winter culture of Mother of Thousands?

This plant (*Saxifraga sarmentosa*) should be kept drier during the winter than while in growth, but not so dry as to cause the leaves to flag or wither.

Nasturtiums in Pots.

What is the best compost for dwarf Nasturtiums in pots, and is there any special culture to grow them for exhibition?

Any good, loamy soil, with a little leaf-mould or old hotbed manure, will do. Three seeds are quite enough for a 5-in. pot, or five for the 6-in. size. The plants may require a little support—it depends upon how they grow. These plants like all the sun they can get. A little liquid manure of almost any kind, such as solutions of sulphate of ammonia (half an ounce to the gallon), soot, guano, etc., may be used with benefit during the later stages, but they are not "hungry" plants. Do not "stop" the buds, but pinch off any seed-pods that may appear.

Olearia Haastii.

I am thinking of putting in a few *Olearia Haastii*. Will you advise whether they require exceptional treatment and soil?

This evergreen shrub may be safely planted, in open weather, at any time from October up to about the middle of March. It does not require any special treatment, being quite hardy, but it likes a light, loamy, or peaty soil, and should have a fairly warm and sheltered situation. There are several other forms besides the well-known *O. Haastii*, such as *O. argophylla*, *O. macrodonta*, and *ilicifolia* (Holly-leaved).

Ornithogalum arabicum.

Would you favour me with cultural hints as to *Ornithogalum arabicum*?

This forms a very handsome plant, growing to a height of about eighteen inches, and having large white blossoms, each with a black centre. In the open air it flowers in June, but comes earlier under glass. It may be grown

on a sunny, sheltered border in the open, or in 5-in. or 6-in. pots under glass, when, with ordinary care, it comes very fine. Use any light, loamy soil.

Pancratium Culture.

Will you advise me as to the culture of *Pancratiums*?

These are tropical, or stove, plants, requiring much the same treatment as other similar bulbous subjects. They should be potted in good, sound, loamy soil, using a 7-in. pot for the larger bulbs, and 6-in. ones for the smaller roots. A genial temperature of sixty-five to eighty degrees suits them well during the summer, with a reduction of five to ten degrees in the winter. Give plenty of water during the growing season, but dry them off slightly when at rest.

Physianthus albens.

Can you give me any information regarding *Physianthus albens*, or *Araujia sericofera*? Will it grow out of doors, or must it have cool-house or hot-house treatment? Is it worth a trial in a suburban garden?

The *Physianthus* is an evergreen climber, succeeding in a cool greenhouse, but hardly out of doors, except, perhaps, in a very warm and sheltered position. It is a free grower, and will run many feet in a comparatively short time. It succeeds best when planted out in a bed composed chiefly of peat, decayed manure, and sand, and is fairly free-flowering. The two principal species in cultivation are *P. albens*, with white flowers in summer, and *P. auricornus*, which produces yellow and white blossoms in the autumn. It would doubtless succeed in a suburban garden with ordinary care.

Potentilla Propagation.

Would it be best to obtain plants of *Potentilla* in the autumn (and, if so, what month), or sow seed in spring? In what position do they thrive best, and what kind of soil do they like?

The plants had better be obtained and planted in the autumn—September or early October—certainly if the soil is light. Seedlings started in the spring would not flower the same year. They prefer a light, loamy soil and a sunny position.

Ribbon Grass.

I have a quantity of fine Ribbon Grass. Is it hardy? If so, must I divide the roots in autumn, and replant, or wait till spring?

This depends upon what kind the Grass is; the common Ribbon or Lady Grass (*Phalaris*) is quite hardy, but the smaller, *Dactylis*, is not quite so, and should be taken up and wintered in a cool house or frame, dividing the roots either in autumn or in the spring. Leave the other alone until the spring.

Richardias in Water.

When is the proper time for planting *Richardia æthiopica* in a pond, and what depth of water should they be in, as I wish to leave them through the winter? The plants are at present in pots, in a cool house.

The plants may be put out in May, in a depth of four to six inches of water, and if this can be increased to a foot or so during the winter, so much the better, as, though nearly hardy, they cannot stand severe frost.

Rudbeckia Culture.

Will you give me the culture and preparation of ground, aspect, etc., for *Rudbeckias*?

Dig the ground two or three feet deep, putting in a fair quantity of manure. A sunny aspect is best, but the *Rudbeckia* is not particular. It is best planted in the spring, about March.

Scabious in Winter.

Should *Scabiosa caucasica* be taken up after they have done blooming, and be protected during the winter?

This plant is not quite hardy, but in a light soil it should be quite safe with a little protection in the way of some dry litter or Fern. Or it may be treated as a biennial, sowing seed each season to flower the next, and wintering the plants in a frame.

Scilla siberica and S. nutans.

I have a quantity of bulbs of *Scilla siberica* and *S. nutans alba*. How should they be treated when grown in pots?

Scilla siberica may be planted quite thickly, and about one inch deep, in pots or pans of light soil—this produces its bright blue flowers very early. The other has fine white flowers in the spring.

Sedums on Wall.

Will you tell me how to make Sedums grow on a brick wall?

This may be done by picking little holes in the mortar here and there, filling them with good, loamy soil, and inserting small pieces of the Sedums quite firmly. These must be kept moist until established and growing. An old wall is better than a new one. Plants of this class do not do as well in or near towns as in the country.

Selaginella from Cuttings.

Can you tell me how to grow the greenhouse moss seed of the *Selaginella*?

The numerous varieties, or, rather, species, of the *Selaginella* (or *Lycopodium*, as it is frequently termed) cannot be grown from seed—cuttings or division are the usual and best methods. Any little piece, whether rooted or not, will "strike" in light, sandy soil and a gentle heat in the spring or summer. If five or six small pieces are put in a 5-in. pot, equidistantly, and in an intermediate temperature, with plenty of moisture, they soon make nice specimens.

Southernwood, or "Old Man."

Can a bush of Southernwood, or "Old Man," about one and a half feet high, be pruned to keep it from getting "leggy"?

This plant may certainly be cut down or pruned, if necessary—that is, if the growth is at all straggling. Do it in the spring, about the beginning of April.

Stonecrop not a Weed.

I have a lot of Stonecrop in my garden, especially on the paths. I have cultivated it, in a way, but have been told it is a weed, and should be destroyed. Is this correct? It has a pretty effect when in flower.

The common Stonecrop (*Sedum acre*), though certainly a wild or native plant, can scarcely be termed a weed. It is always green and pleasing, and when in bloom is really pretty, so why destroy it?

Sunflower Seed for Poultry.

Sunflower seeds being recommended for poultry, I wish to plant a small plot to test the yield of the plants. Will you give a few hints as to distance apart, suitable kind to grow, and whether ground should be heavily manured?

The common tall, single Sunflower is the best to grow. They should be planted two feet apart in the rows, and three feet apart between the latter, and they do best in rich, well-manured ground. The seed may be sown in spring under glass, or on a sheltered, sunny border, in either case transplanting the seedlings when four to six inches high.

Sweet Sultan.

Does Sweet Sultan *centaurea* require any special treatment? Mine did

well until the large buds were ready to burst into bloom. Then they died, but some of the buds opened, though of a bad shape.

This pretty plant is of a somewhat delicate nature, and frequently fails as described. It does best on a warm, sunny border of light, well-drained soil, and in a fine season there will be few failures. Try the use of a little lime on the border.

Sweet Williams.

May Sweet Williams be left in the ground from year to year, or is it better to take cuttings, and grub up the old plants?

In suitable soils, these plants will often live and bloom for several years, but the best plants, as well as blossoms, are obtained by sowing seed annually, in April, pricking the seedlings off in due course, and planting them out in the autumn, to flower the following year.

Sycamores Shortened Back.

I have some young Sycamores, closely planted in a row, which I wish to cut back to form a dense screen. Should I cut close to the stem?

The trees may be cut back at any time after the leaves have fallen, but before they begin to grow again in the spring. To obtain a close mass of growth and foliage near the ground, the trees should be merely topped, and the lateral branches shortened moderately, repeating this from time to time, as required.

Syringas for Small Gardens.

Is a Mock Orange plant suitable for a small garden facing due south? How large does it grow?

This plant is known botanically as *Philadelphus*, and commonly as the *Syringa*. There are several species, but that usually cultivated is *P. coronarius*, a vigorous shrub, growing from six to twelve feet or so in height, bearing numerous large trusses of very fragrant white blossoms in the early summer. It is easily grown in any good garden soil, and enjoys a fairly sunny position; the flowers are nice for cutting, but, unless gummed, they drop their petals very quickly. It is perfectly hardy.

Tacsonias in Pots.

Can I hope to grow and flower a scarlet *Tacsonia* in a pot or tub, and, if so, how should it be treated? I have a large conservatory, but no border.

The *Tacsonia* should do well in a tub or large pot, with a compost consisting largely of fibrous loam, to which some leaf-mould, a little manure, and sand may be added. Give good drainage.

Thyme as an Edging.

I have just planted an edging of Silver Thyme. I should like to know if I can cut it fairly hard, so as to form a formal edging? If so, what is the best time?

Yes, the plants may be cut back to any reasonable extent, and the best time is in the spring, just as they are beginning to grow again.

Tigridia Culture.

Will you inform me at what depth, and how far apart, *Tigridias* should be planted, and give me a few hints on their culture?

The roots should be planted about two inches deep, and six or eight inches apart. The best effect is obtained by planting them in groups or patches of about half a dozen. No special culture is required, all that is necessary being to plant them in light, sandy soil and a warm position, in March, and take up the roots when they die off in the autumn.

Torenia and their Management.

Could you give me a few hints on how and when to sow *Torenia*s, and upon their management?

The seed should be sown in light, sandy soil in the spring, about March, placing the pot or pan in a warm house or hotbed. When up, prick the plants off singly, and, in due course, transfer them to small pots. When large enough, pot them on into 5-in. or 6-in. sizes, to flower, using light loam, with a little leaf-soil and sand added. They also do well in small baskets. They like plenty of moisture, and a temperature rather above that of an ordinary greenhouse.

Tritonias.

I should like to cultivate some Tritonias, and shall be glad of any hints you can give me.

The Tritonias are South African bulbous plants, with slender stems, bearing some resemblance to the Sparaxis. The most common kind is *T. crocata*, with flowers of a rich orange colour, but there are numerous hybrid forms of various colours. Plant the bulbs in a bed of light, rich, sandy soil in October, choosing a warm and sheltered position, if possible, and as the bulbs are not perfectly hardy, the bed had better be covered with a layer of dry litter, or Fern, for the winter, removing it towards the end of March, or as soon as the growth shows through the soil.

Tussilago fragrans.

Would you inform me as to the culture of *Tussilago fragrans*, or the Winter Heliotrope? I have some potted in a cold frame.

This is perfectly hardy, and as soon as the plants have become well rooted out in the pots, and are beginning to grow, they had better be planted out in a bed of good, loamy soil, in a fairly warm and sheltered situation, where the flowers will expand better than right out in the open. It is of no use for pot culture.

Verbascum Damping-off.

I sowed some *Verbascum nigrum* in a box in the greenhouse; they came up very sharp, and damped off as quickly. Kindly say the cause.

These are hardy plants, and directly the seedlings appeared they should have been removed to a cold frame, with plenty of air, pricking them off and planting them out as quickly as possible. Such things will not stand any "coddling."

Veronicas may be Cut Down.

I have several plants of *Veronica Traversii*. Will you inform me whether I may cut them down to, say, six inches above the ground, as I want to have them small and bushy?

Yes, if well-established, the plants may be cut down as proposed, and they will probably break up again. April is about the best time to do this.

Weigela from Cuttings.

When is the best time to take cuttings of the *Weigela*?

Cuttings formed of the young shoots of this plant may be struck in sandy soil in the spring, in a close frame, but the usual method is to insert pieces of the ripened wood in a frame, or on a sheltered border, in the autumn.

Yews Growing Straggly.

My Yews are very straggly and overgrown; how far should they be cut back, and when?

The Yews may be cut back to any reasonable extent in the spring (say, in April) with good results.

Zephyranthes candida.

Will you tell me the treatment required for a *Zephyranthes candida*. I have several bulbs in a pot, but have only had one flower.

This plant requires to be potted in light, loamy soil, with good drainage,

watering freely during the spring and summer, or while in growth and bloom, and keeping moderately dry (though by no means very or too much so) during the late autumn and winter

Zinnias Unsuitable for Pots.

Can Zinnias be successfully grown in pots, and, if so, will you describe the treatment from the seedling stage?

These are not good subjects for pot culture, being of an exceedingly hungry, as well as thirsty nature. It may be done by using rather large pots, and giving the plants plenty of water and liquid manure when in full growth. But if plants in pots are wanted, we would rather plant them out in the ground, and lift and pot them when in bloom, in the same way as Asters, etc., are treated.

THE END.

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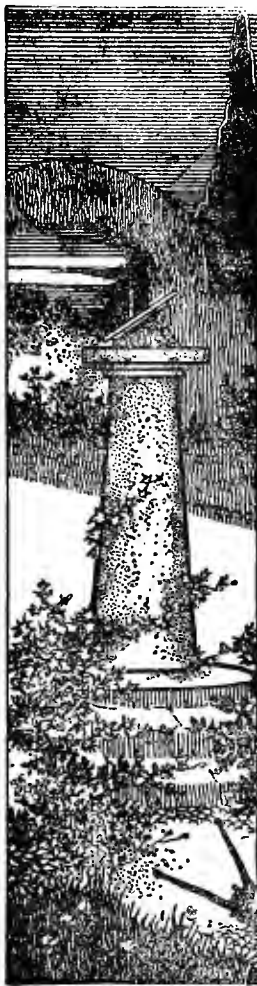
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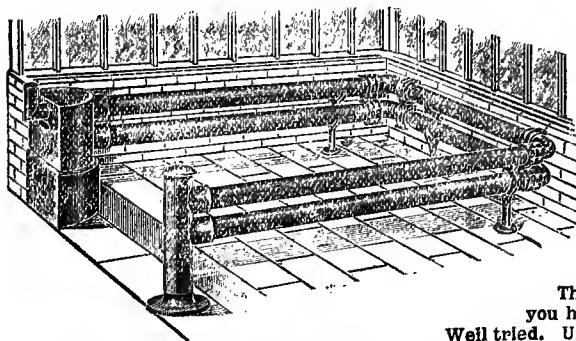
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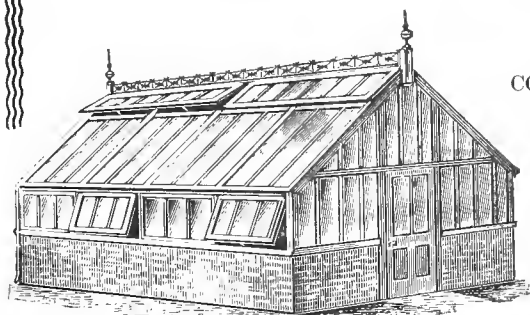
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